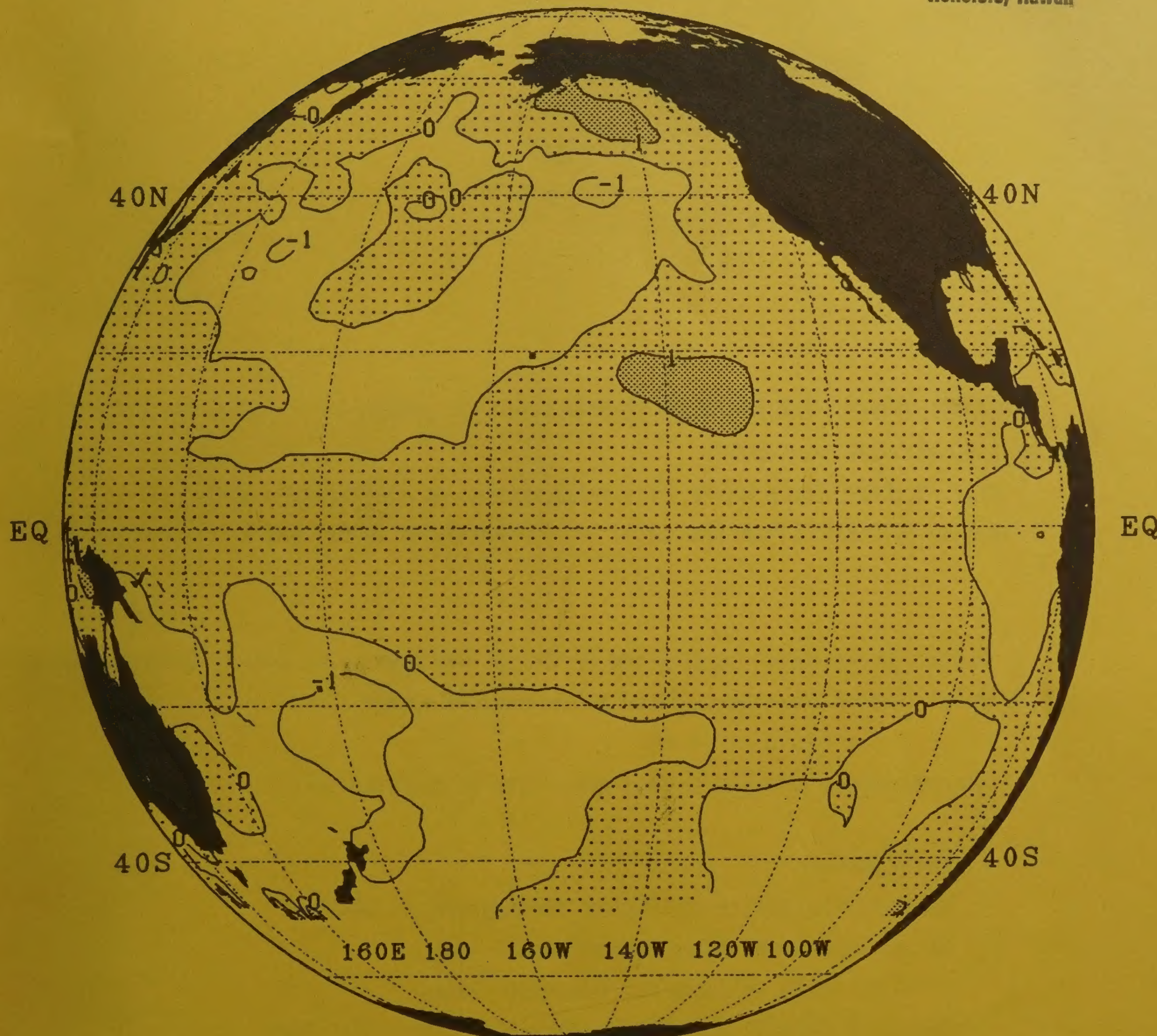
気象庁海洋月報

Monthly Ocean Report

June 1994 (No. 18)



El Niño Monitoring Center
Japan Meteorological Agency

気象庁海洋気象部海洋課
エルニーニョ監視センター

平成6年6月

気象庁海洋月報は、気象庁海洋気象部海洋課エルニーニョ監視センターで作成されています。

本月報に関する問い合わせは、

〒100　東京都千代田区大手町 1-3-4 気象庁エルニーニョ監視センターまで。

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Monthly Ocean Report is prepared by the El Niño Monitoring Center, Oceanographical Division, Marine Department, Japan Meteorological Agency.

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表紙は1994年６月の太平洋の月平均海面水温偏差図です。
陰影部は平年より高温の海域を示しています。

The figure on the front cover shows the monthly mean SST anomalies for June 1994 in the Pacific Ocean.
Areas of positive anomalies are shaded.

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海況の特徴（１９９４年６月）

太平洋の海況

太平洋赤道域の海面水温は、ペルーの沖合で平年より0.5℃以上低かったほかは、全般に平年より高かった。エルニーニョ監視海域（4°S～4°N、150°W～90°W）の海面水温偏差は、+0.2℃だった（第１表、第１図、第６図）。

赤道域表層の28℃以上の暖水層は、145°Eから175°Wにかけて80m前後に達し、最も厚かった（第３図）。

北太平洋では、30°N帯の160°Eから170°Eにかけてと40°N・150°W付近で平年より1℃以上低かった。一方、15°Nに沿って145°Wから130°Wにかけてとアラスカ湾沖では平年より1℃以上高い状態が続いていた（第１図）。

日本近海の海況

日本近海は、南西諸島周辺から九州近海及び日本海西部にかけて平年より低かったほかは、全般に平年より高かった（第17図）。

黒潮は九州から四国にかけて離岸し、紀伊半島に接岸して東に流れ、三宅島付近を通って房総半島沖を東に流れていた（第20図）。

本州東方の親潮系の冷水（深さ100mで5℃以下）は、沿岸寄りの分枝は38.6°N・143.0°Eまで、沖合の分枝は39.1°N・146.0°Eまで、それぞれ達していた（第19図）。

熱帯の気象

西部熱帯太平洋の対流活動活発域は、平年より北西に位置していた。上層雲量の分布で見ると、南シナ海やベンガル湾で正偏差、フィリピン東部や海洋大陸付近で負偏差であった。北太平洋では亜熱帯高気圧が強く、北に張り出していた。赤道上の下層東西風は、太平洋のほぼ全域で東風偏差であった。南方振動指数（ＳＯＩ）は-1.0と今月も負の値となった（第１表、第12図、第13図）。

［気象庁長期予報課提供］

世界海洋循環実験（ＷＯＣＥ）計画の一環として、1994年７月から８月にかけて実施される気象庁の海洋気象観測船「凌風丸」の観測計画をiiiページに紹介する。

HIGHLIGHTS June 1994

Pacific

Sea surface temperatures (SSTs) in the equatorial Pacific were above normal except off Peru where SSTs were more than 0.5°C below normal. The SST index for region B (Fig. 6) was +0.2°C (Table 1 and Figs. 1, 6).

Surface warm water (above 28°C) along the equator was thickest between 145°E and 175°W, reaching around 80m (Fig. 3).

In the North Pacific, SSTs were more than 1°C below normal along 30°N from 160°E to 170°E and around 40°N, 150°W. SSTs along 15°N from 145°W to 130°W and off the Gulf of Alaska continued to be more than 1°C above normal (Fig. 1).

Seas adjacent to Japan

SSTs in the seas adjacent to Japan were above normal except around the Nansei Islands and Kyushu, and the western part of the Japan Sea. (Fig. 17).

The Kuroshio flowed off Kyushu and Shikoku, then eastward from Kii Peninsula, passing near Miyake Island and on to the Boso Peninsula (Fig. 20).

The Oyashio cold water (below 5°C at a 100m depth) extended southward to 38.6°N, 143.0°E and 39.1°N, 146.0°E, respectively (Fig. 19).

Atmospheric conditions in the tropics

The enhanced convection was observed in the northwestern part of the western tropical Pacific. Positive high-cloud amount anomalies were observed in the South China Sea and the Bay of Bengal, while negative ones were observed in the east of Philippines and near the Maritime Continent.

Subtropical anticyclones were stronger than normal over the North Pacific. Low-level equatorial easterlies were stronger than normal over most part of the Pacific. The Southern Oscillation Index (SOI) continued negative value (-1.0) (Table 1 and Figs. 12, 13).

[prepared by the Long-range Forecast Division, JMA]

Cruise plan of R/V Ryofu Maru of the Japan Meteorological Agency as a part of WOCE to be conducted from July to August 1994 is shown on page iii.

Cruise plan of R/V Ryofu Maru as a part of WOCE

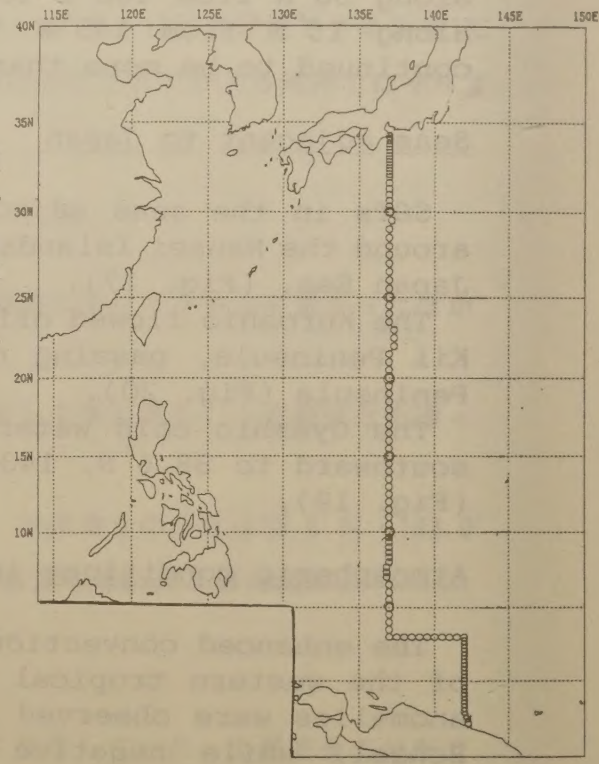
世界海洋循環実験（ＷＯＣＥ）計画は、世界気候研究計画（ＷＣＲＰ）の一環として世界気象機関（ＷＭＯ）、ユネスコ政府間海洋学委員会（ＩＯＣ）及び国際学術連合会議（ＩＣＳＵ）が共同で1990年から1999年にかけて実施しているもので、その主な目標は、「気候変動を予測するための海洋モデルを開発し、それを評価するために必要な観測データを取得すること」及び「取得されたデータから海洋循環の長期変動を明らかにする方法を開発すること」である。

ＷＯＣＥ計画では、世界の海洋に設定された基準観測線に沿った水温、塩分、溶存化学物質等の精密な観測を世界各国の観測船が分担して行うこととなっている。

同計画の中で気象庁が担当する東経137度に沿った日本の南岸からニューギニア島の北岸までの基準観測線の観測が、以下のとおり海洋気象観測船「凌風丸」により実施されている。

日　　程：1994年７月７日～８月２５日（予定）
観 測 線：東経137度線（日本南岸～北緯３度）
　　　　　北緯３度線（東経137度～東経142度）
　　　　　東経142度線（北緯３度～ニューギニア島北岸）
観測種目：海面から海底直上までの各層海洋観測（水温、塩分、酸素、栄養塩、フロン、トリチウム等）ほか

この基準観測線は、北西太平洋の主な海流系を横切る位置にあり、それらの海流の構造を解明する上で重要なものであり、その観測成果には国内外から大きな期待が寄せられている。



図Ａ　海洋気象観測船「凌風丸」の観測ライン
Fig. A　Cruise track of R/V Ryofu Maru

The World Ocean Circulation Experiment (WOCE) programme, a sub-programme of the World Climate Research Programme (WCRP), is jointly conducted by the World Meteorological Organization (WMO), UNESCO's Intergovernmental Oceanographic Commission (IOC) and the International Commission of Scientific Unions (ICSU) for the period from 1990 to 1999 with the goals:

1) to develop models useful for predicting climate change and to collect the data necessary to test them,
2) to determine the representativeness of the specific WOCE data sets for the long-term behavior of the ocean, and to find methods for determining long-term changes in the ocean circulation.

Within the WOCE programme, precise hydrographic observations for sea temperature, salinity and dissolved chemical materials along standard observation lines are made by the research vessels of the participating countries.

The Japan Meteorological Agency, responsible for the observations of the line mostly along the meridian of 137°E, is conducting the observations on board R/V Ryofu Maru as follows:

Date:	7 July – 25 August 1994 (tentative)
Observation lines:	137°E meridian (off south coast of Japan –3°N)
	3°N parallel (137°E – 142°E)
	142°E meridian (3°N – off north coast of Papua New Guinea)
Parameters:	temperature, salinity, dissolved oxygen, nutrient, chlorofluorocarbons, etc. (from surface to ocean floor)

Date		1993 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1994 JAN	FEB	MAR	APR	MAY	JUN
Pacific Sea Surface Temperature (℃)																			
D	(14N～ Eq.)	28.0	28.0	28.2	28.6	28.8	29.2	29.1	28.9	29.1	29.1	29.5	29.1	28.4	28.5	28.6	29.1	29.4	29.6
	(130E～150E)	-0.5	-0.3	-0.2	-0.2	-0.3	-0.1	-0.1	-0.2	-0.1	-0.2	+0.3	+0.2	-0.1	+0.2	+0.2	+0.3	+0.3	+0.3
A	(4N～ 4S)	28.5	28.4	28.4	28.7	29.0	29.1	29.1	28.8	29.1	28.8	28.9	28.7	28.2	28.0	28.2	28.4	28.9	29.0
	(160E～150W)	+0.5	+0.4	+0.3	+0.5	+0.5	+0.6	+0.6	+0.4	+0.8	+0.4	+0.5	+0.5	+0.2	0.0	+0.1	+0.2	+0.4	+0.5
B	(4N～ 4S)	25.5	26.6	27.4	28.1	28.0	27.0	25.8	24.9	24.8	25.0	25.2	25.3	25.7	26.1	26.9	27.0	26.8	26.3
	(150W～ 90W)	+0.1	+0.4	+0.5	+1.0	+1.4	+0.9	+0.6	+0.3	+0.2	+0.4	+0.6	+0.4	+0.3	-0.1	0.0	-0.1	+0.2	+0.2
C	(Eq. ～ 10S)	24.3	26.1	27.0	26.4	25.2	23.3	22.1	21.0	20.8	21.3	21.5	22.8	24.7	26.0	25.3	24.2	23.4	22.2
	(90W～ 80W)	0.0	+0.4	+1.1	+1.3	+1.3	+0.6	+0.5	+0.4	+0.5	+0.6	0.0	+0.2	+0.4	+0.3	-0.6	-0.9	-0.5	-0.5
Pacific Sea Level Anomaly (cm)																			
YAP	(10N, 138E)	7	9	11	1	-2	-2	1	-1	5	8	8	10	7	7	6	2	2	
RABAUL	(4S, 152E)	-9	-10	-14	-12	-13	-11	-8	-9	-7	-6	-5	-2	-1	3	4	5	3	
MAJURO	(7N, 171E)	-1	-4	-4	-8	-1	6	5	3	1	5	2	3	2	2	3	5	1	
TARAWA	(1N, 173E)	1	7	10	3	5	6	4	7	4	6	2	1	6	-1	6	6	7	
CHRISTMAS	(2N, 157W)	5	4	8	6	5	-1	-2	-1	-1	-2	-1	-7	-3	-7	0	0	1	
SANTA CRUZ	(1S, 90W)	4	8	7	7	10	4	0	0	1	3	0	0	-1	0	-4	-8	-3	

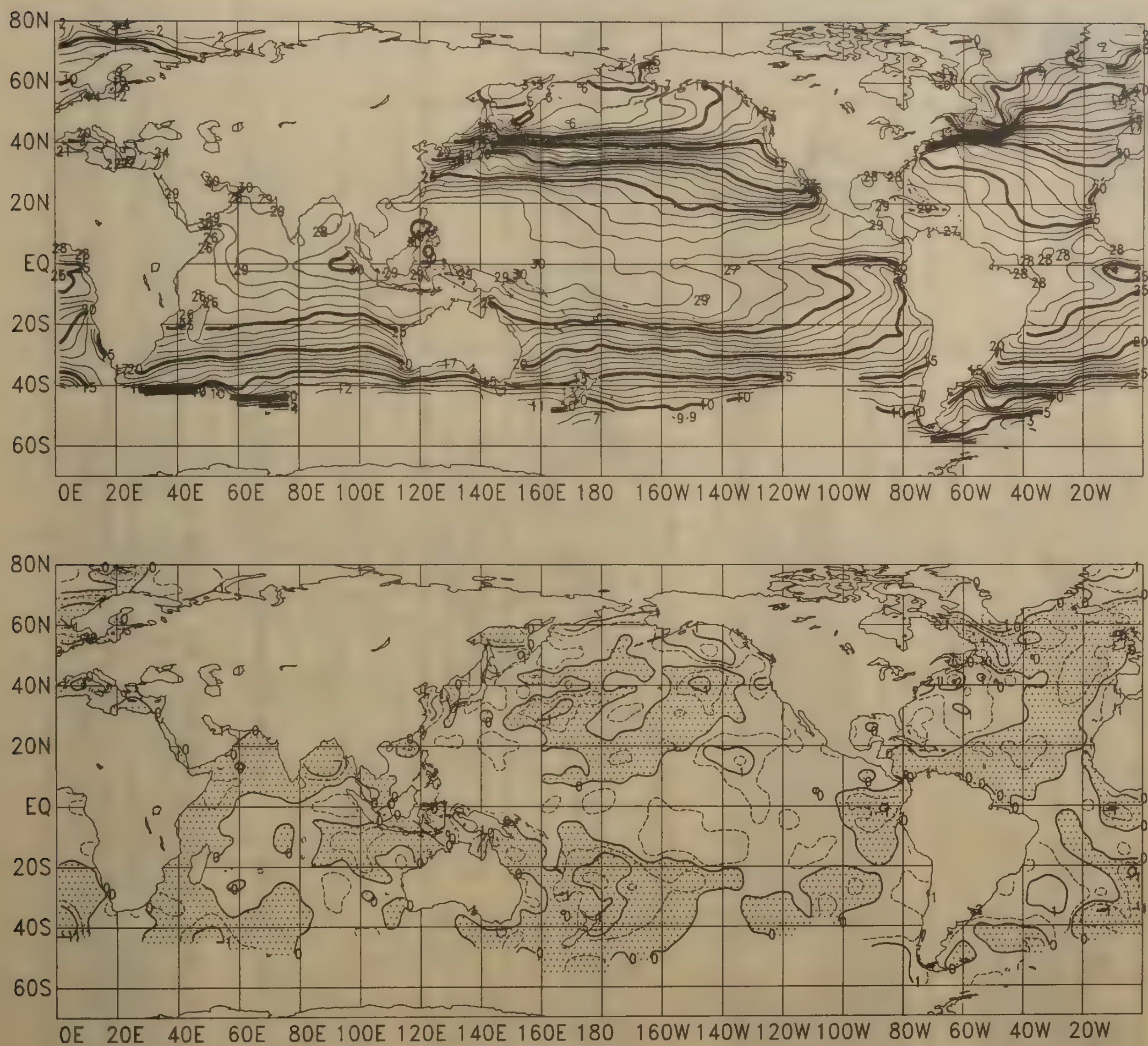
第１表（a）エルニーニョ監視指数

Table 1(a) El Niño monitoring indices. Data sources are the El Niño Monitoring Center, JMA for the sea surface temperature and the SOC of ISLP-PAC, Department of Oceanography, University of Hawaii for the sea level anomaly.

Date	1993											1994						
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Southern Oscillation Index																		
SOI (TAHITI-DARWIN)	-0.8	-0.6	-0.5	-1.9	-0.8	-1.6	-1.0	-1.5	-0.7	-1.4	-0.0	0.2	-0.2	0.1	-0.8	-2.1	-1.4	-1.0
TAHITI (17.5S, 150W)	-1.4	-1.9	1.0	-0.7	0.2	-0.6	-1.1	0.0	-0.0	-0.9	0.1	-0.0	-0.1	0.0	-0.1	-1.5	-0.8	-0.9
DARWIN (12.5S, 131E)	0.4	-0.3	2.4	1.9	1.4	1.3	0.4	2.2	1.4	1.3	0.1	-0.5	0.3	-0.2	1.7	1.2	1.0	0.3
High Cloud Amount Index																		
HCLD-PH (20N ~ 10N) (110E ~ 140E)	-1.0	-0.3	-0.4	-0.5	-2.2	-1.9	-0.5	-0.4	0.7	-0.1	-0.6	1.2	-0.5	-0.5	0.6	0.7	0.2	-0.3
HCLD-MC (5N ~ 5S) (110E ~ 135E)	-1.1	-0.9	-1.1	0.3	-1.4	-2.1	-1.0	-1.4	-1.0	-1.5	-0.8	-0.2	-0.4	-0.5	0.8	0.4	0.4	-1.0
HCLD-DL (5N ~ 5S) (170E ~ 170W)	0.8	1.4	0.5	2.8	2.0	1.8	1.3	0.3	1.8	1.7	-0.2	0.0	0.0	-0.7	-0.6	0.4	-0.3	-0.3
Equatorial Zonal Wind Index																		
U200-IN (5N ~ 5S) (80E ~ 100E)	-0.1	0.8	-0.9	-0.3	0.5	0.4	-0.3	-0.5	-2.1	-0.7	-0.8	-1.8	-0.4	-0.8	-1.5	-0.2	-0.3	-0.5
U200-CP (5N ~ 5S) (180 ~ 125W)	-0.3	-0.3	0.0	-0.6	-1.3	-0.0	1.1	0.3	-0.3	0.0	-0.5	0.4	0.4	0.8	0.2	-0.3	-0.5	-0.7
U850-WP (5N ~ 5S) (160E ~ 175W)	0.3	0.9	0.3	0.8	0.5	0.3	0.1	0.7	-0.0	0.9	-0.4	-0.7	-1.2	-1.0	-0.6	-0.5	-0.3	-0.4
U850-CP (5N ~ 5S) (170W ~ 135W)	0.2	0.0	-0.1	0.3	0.6	0.6	-0.8	0.1	0.2	0.4	0.3	-0.5	-0.6	-0.9	-0.2	-0.4	0.2	-0.6
U850-EP (5N ~ 5S) (130W ~ 100W)	0.1	-0.1	0.2	0.5	0.9	0.7	-0.4	0.8	1.0	0.2	0.9	0.2	0.1	-0.4	0.1	-0.5	0.0	-0.5

第1表 (b) エルニーニョ監視指数(続き)

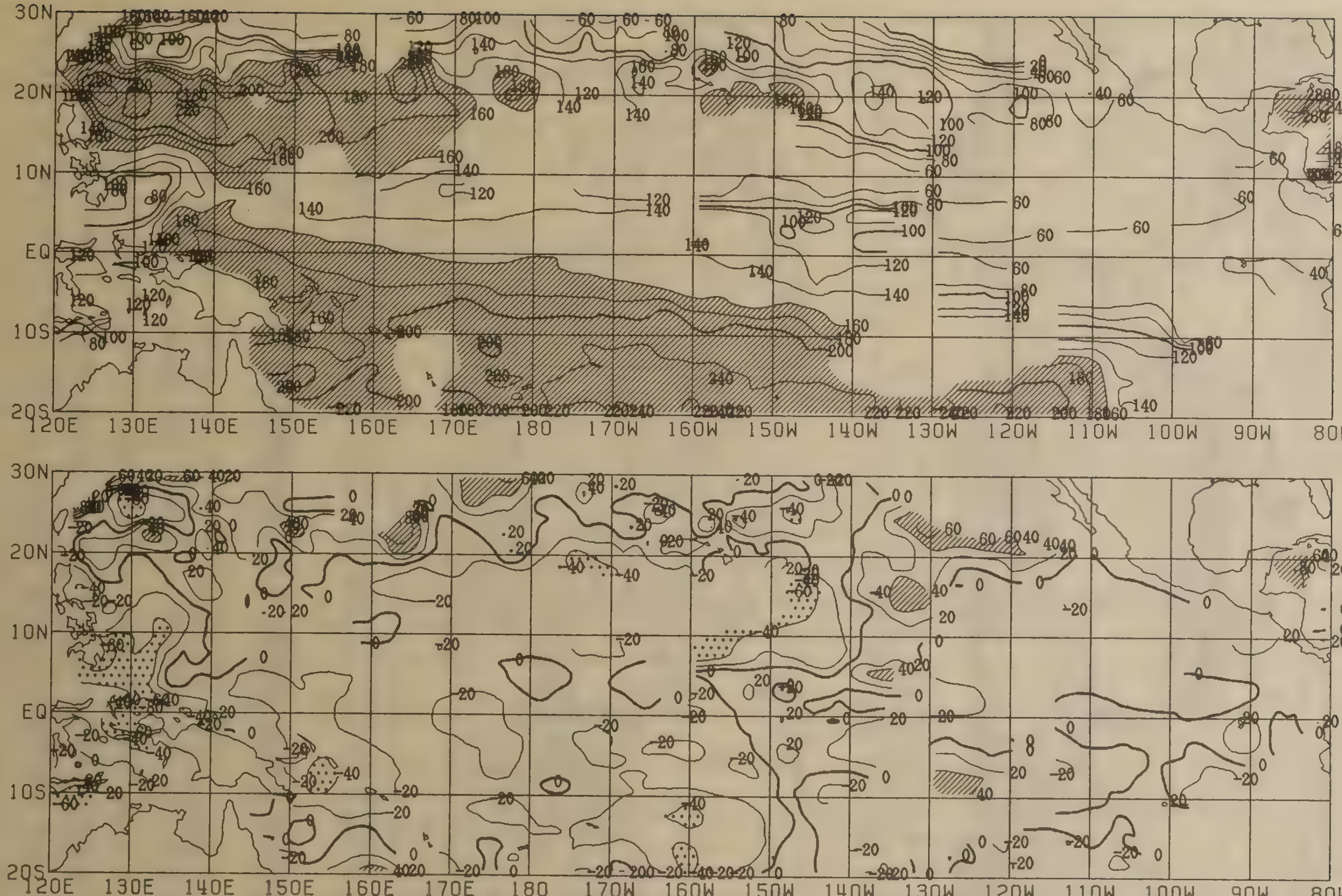
Table 1(b) El Niño monitoring indices (continued).
Data source for these atmospheric conditions is the Long-range Forecast Division, JMA.



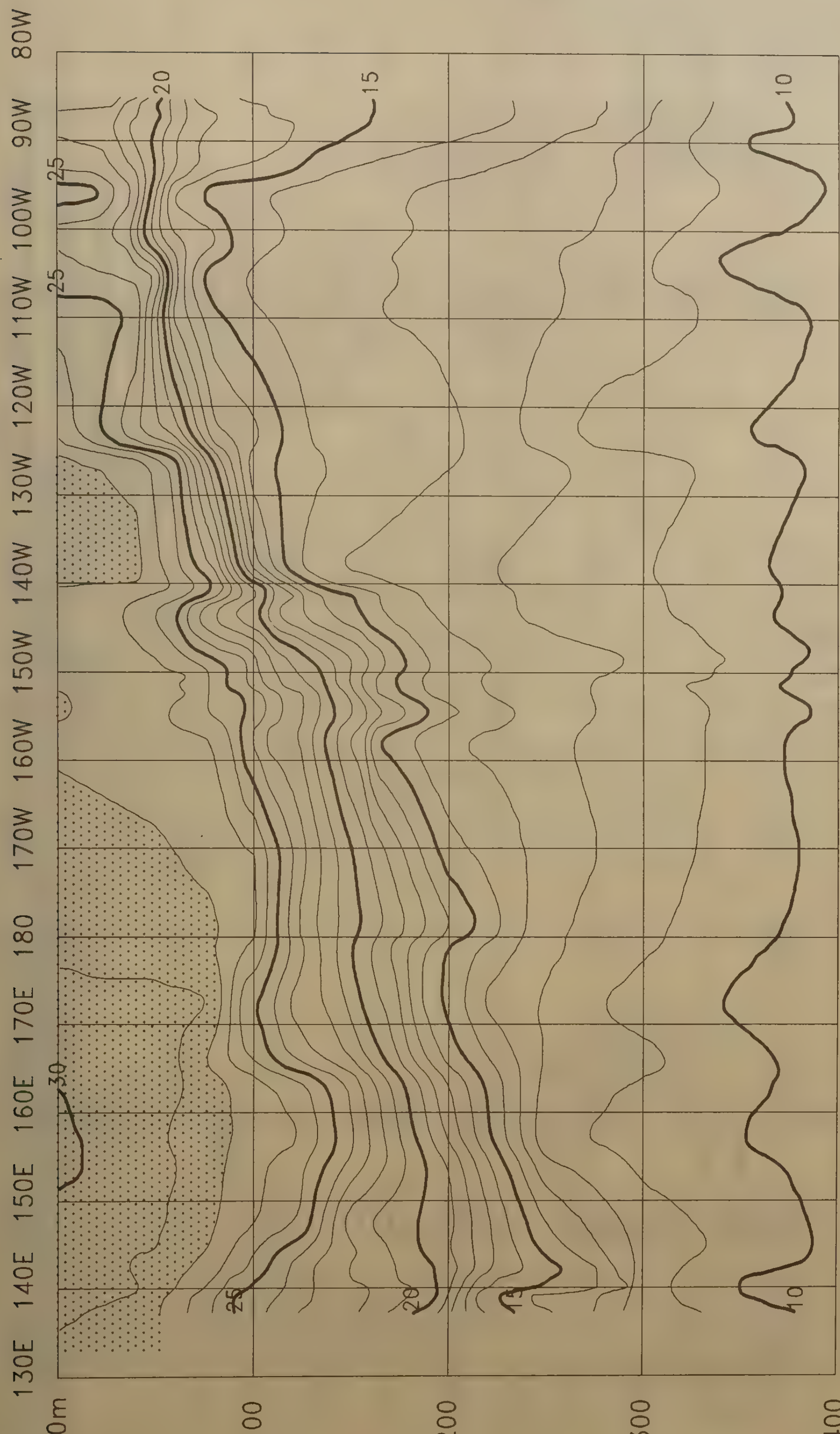
第１図　全球月平均海面水温図（上）及び偏差図（下）（1994年 6月）

Fig.1　Monthly mean sea surface temperature in the global ocean (top) and anomalies (bottom) for JUN 1994.　Anomalies are computed with respect to the JMA climatology (1961–90) (Climatic charts of sea surface temperatures of the western North Pacific and the global ocean, March 1991).　The Contour interval is 1°C and additional anomaly contours of ±0.5°C are shown as broken lines.　Negative anomalies are stippled.

Depth of 20°C & Anomalies in the Pacific Ocean

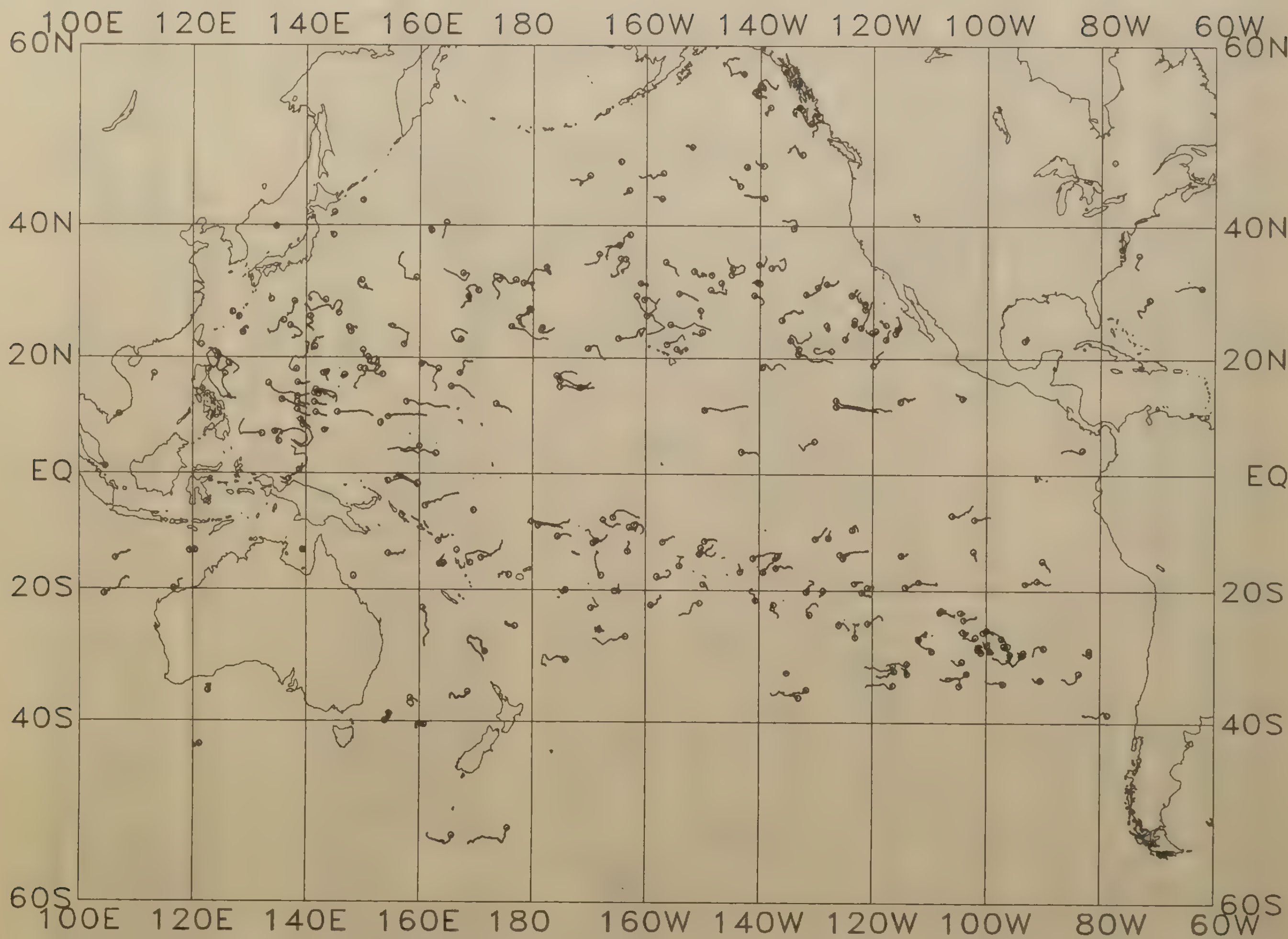


第２図　太平洋表層水温（20℃深度）図（上）及び偏差図（下）（1994年 6月）
Fig.2 The depth of a 20°C isotherm in the Pacific Ocean (top) and anomalies (bottom) for JUN 1994. Anomalies are computed with respect to the climatology (Levitus, 1982, Climatological Atlas of the World Ocean, NOAA).
The contour interval is 20m with shading for values greater than 160m (top), and shading/stippling for values greater/smaller than +40m/−40m (bottom).



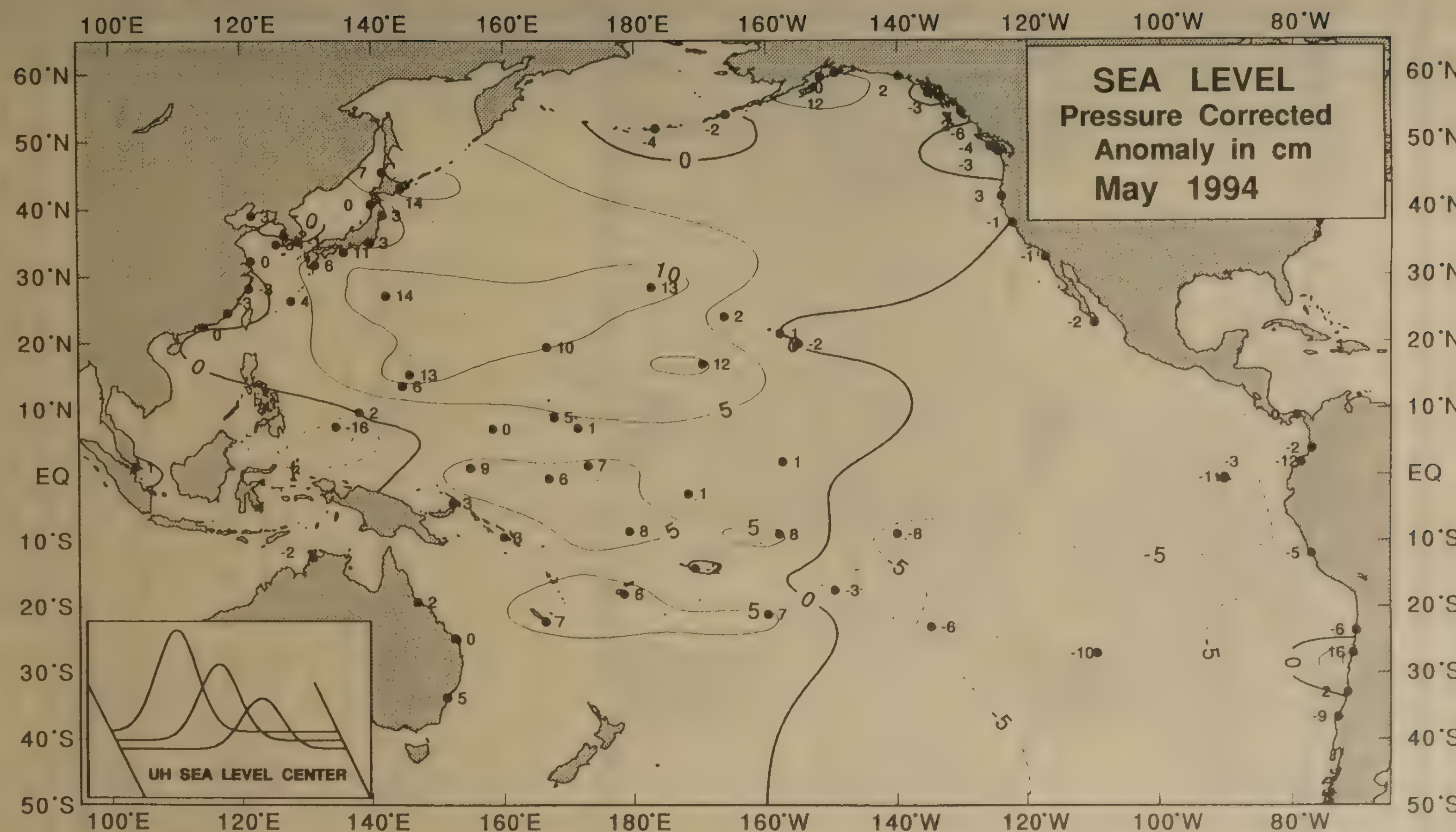
第３図　太平洋赤道に沿う表層水温断面図（1994年 6月）

Fig.3　Depth–longitude section of the Pacific Ocean temperature along the equator for JUN 1994.　The contour interval is 1° C with spotted shading for values greater than 28° C.



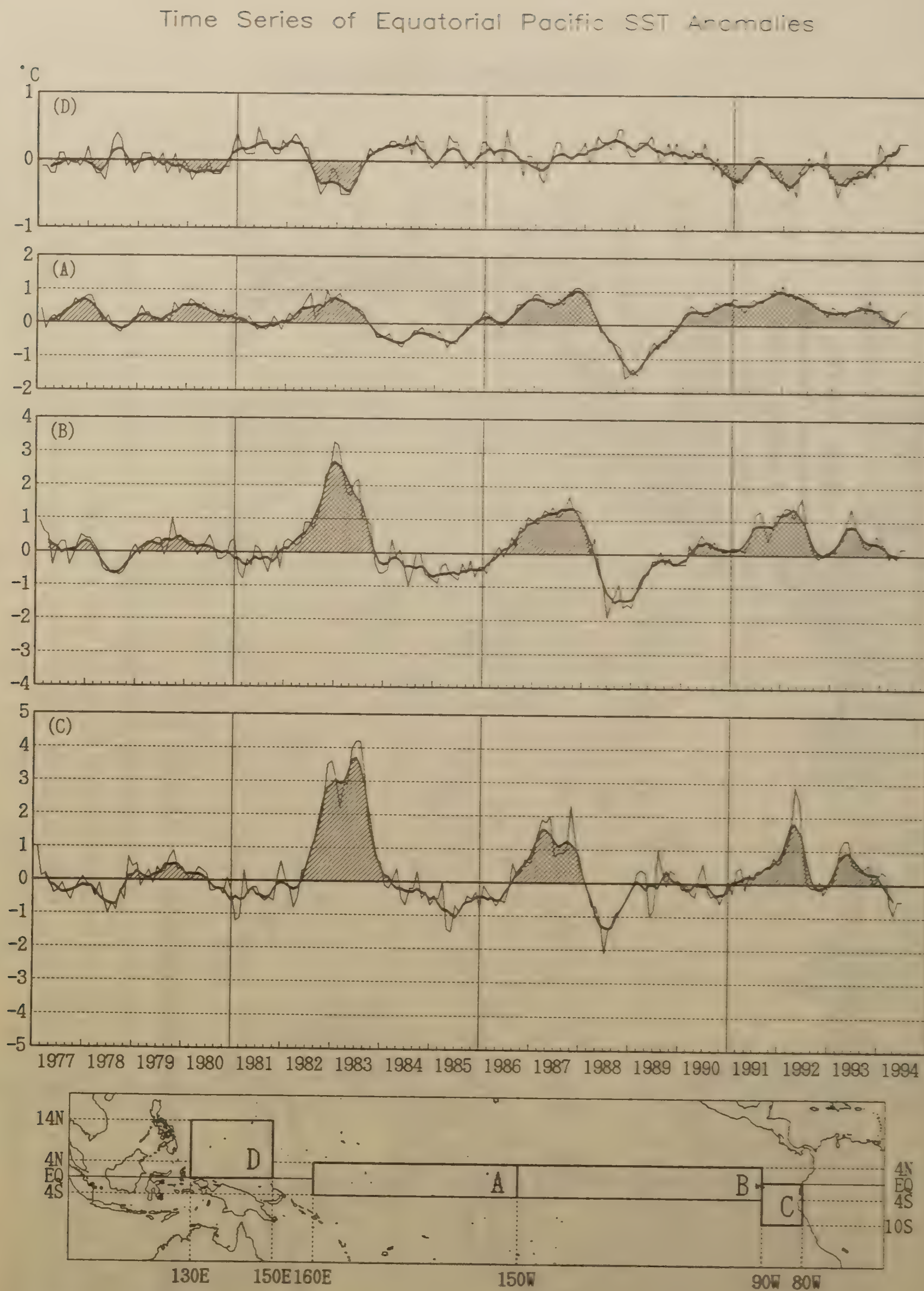
第4図　太平洋ブイ流跡図(1994年 6月)

Fig.4 Movements of drifting buoys in the Pacific Ocean during JUN 1994. Each track is one buoy, with the small circle representing the buoy's last position for the month.



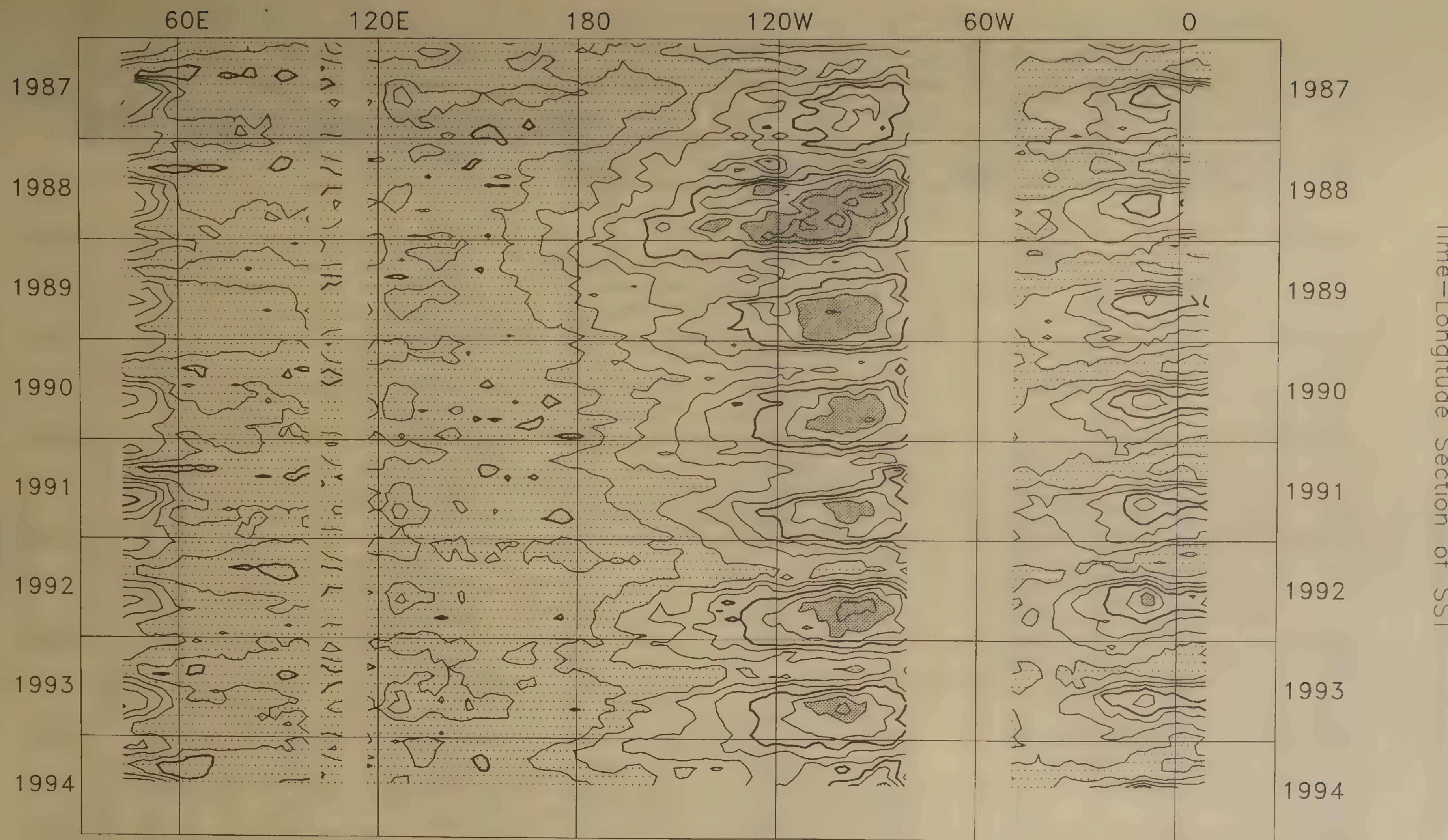
第5図　太平洋海面水位偏差図（ 1994年 5月 ）

Fig.5　Sea level anomalies obtained from the 1975 to 1986 mean MAY sea level adjusted for atmospheric pressure (MAY 1994).
This figure is prepared by the SOC of ISLP–PAC, Dept. of Oceanography, Univ. of Hawaii.



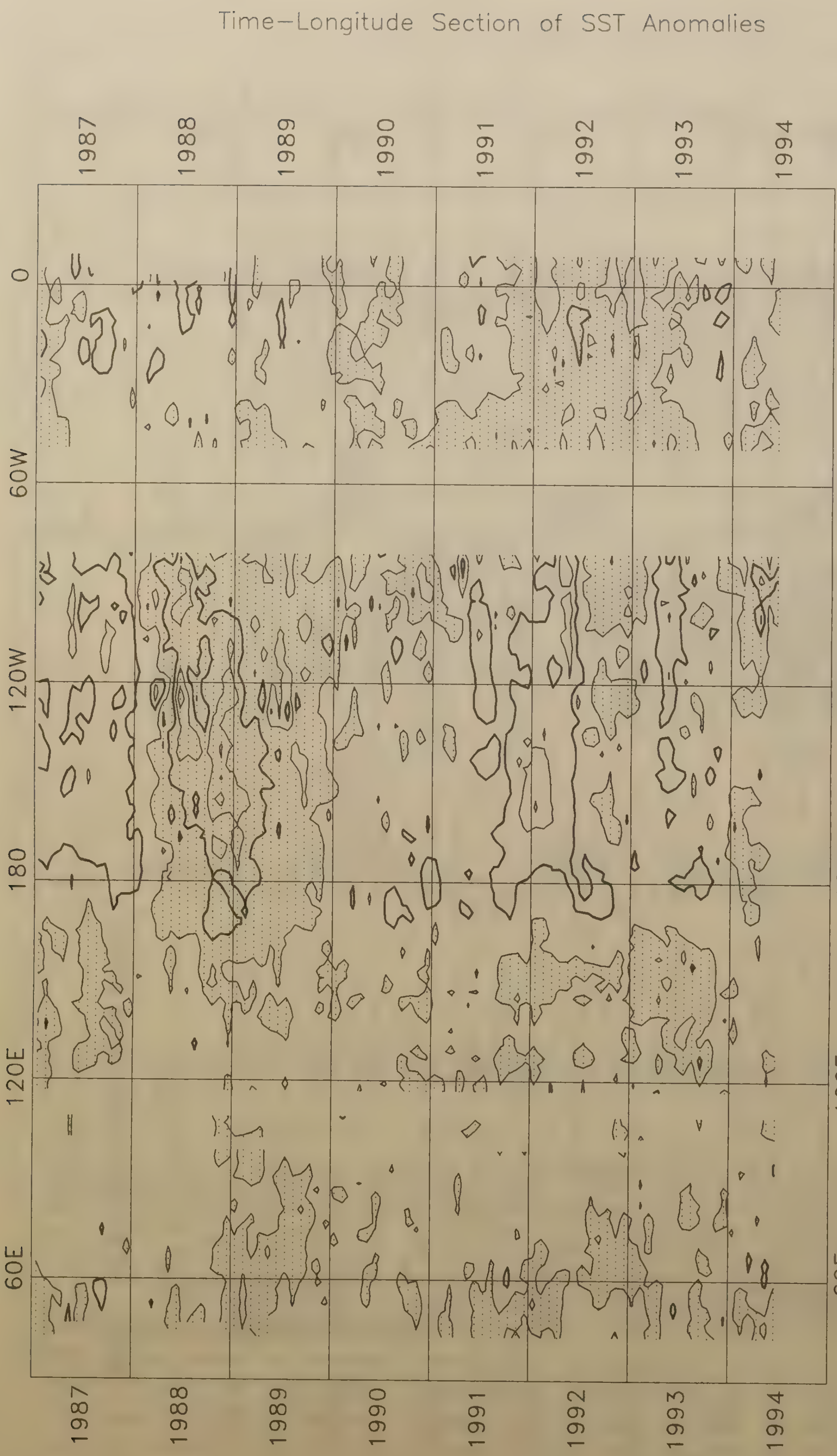
第6図　赤道太平洋海面水温偏差時系列図

Fig.6 Time series of monthly mean SST anomalies in the equatorial Pacific Ocean for the areas indicated at the bottom of the figure. Thin lines show the monthly values and thick lines their 5 month running mean. Positve anomalies (A,B,C) and negative anomalies (D) are shaded. Anomalies are computed with respect to the JMA climatology (1961–90).



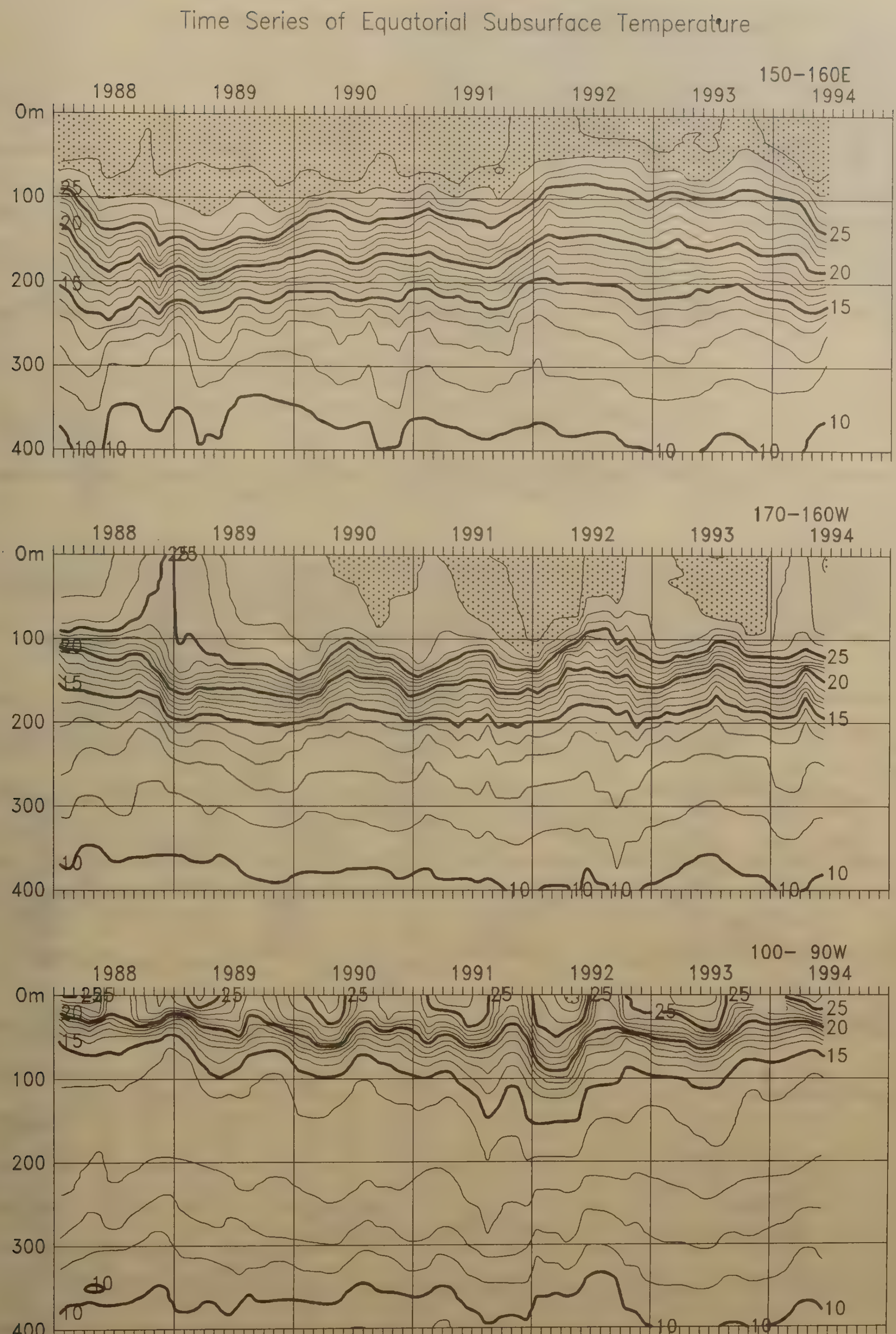
第7図　赤道に沿う海面水温時系列図

Fig.7 Time−longitude section of SSTs along the equator (2° N−2° S) in the global ocean. The contour interval is 1° C, with thick contour lines at 25 and 30° C. SST values greater than 28° C are spotted and values less than 23° C are shaded.



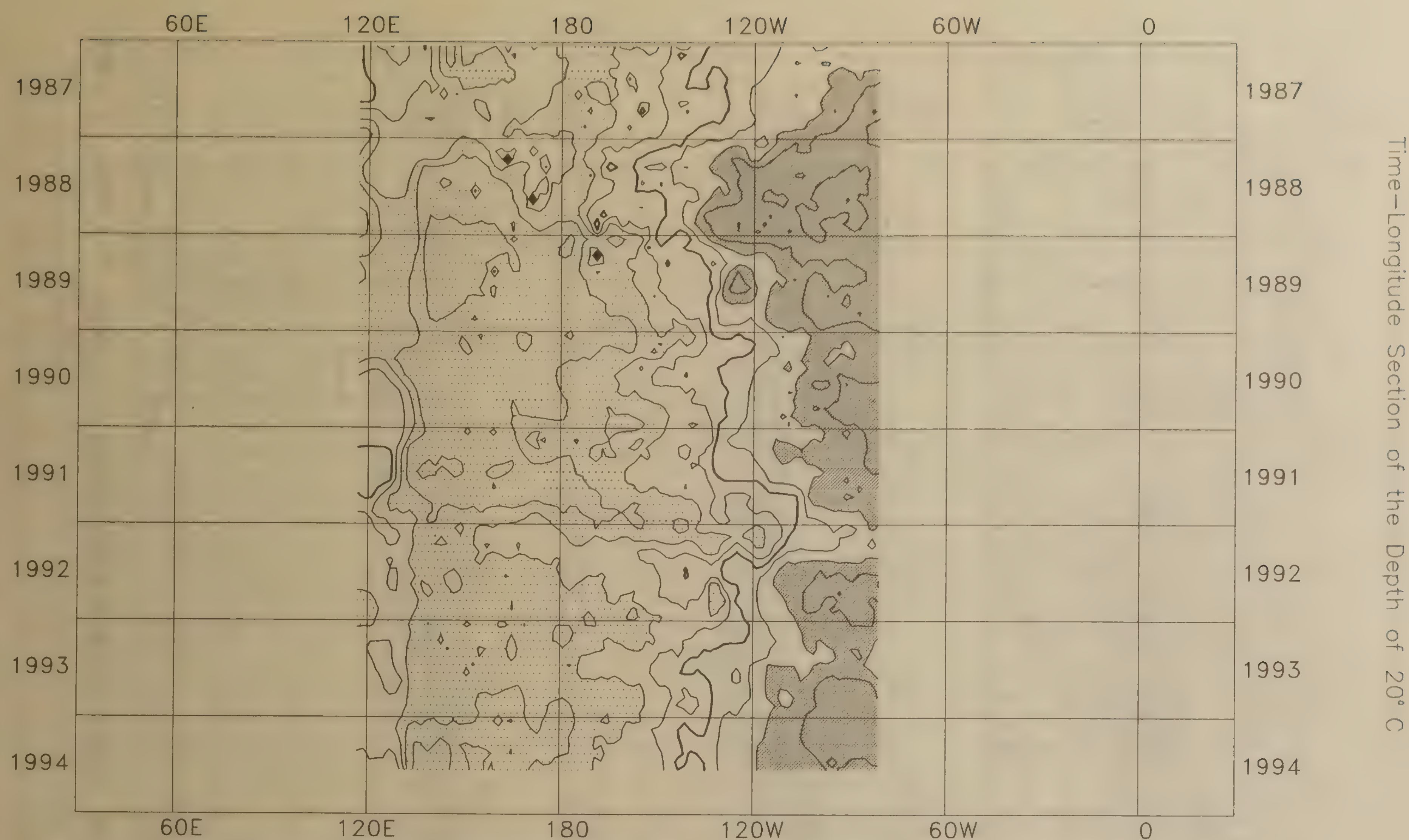
第8図　赤道に沿う海面水温偏差時系列図

Fig.8 Time-longitude section of SST anomalies along the equator (2° N–2° S) based on the JMA climatology (1961–1990). The contour interval is 1° C, with thick contour lines at +1° C and −1° C. Negative anomalies are spotted.



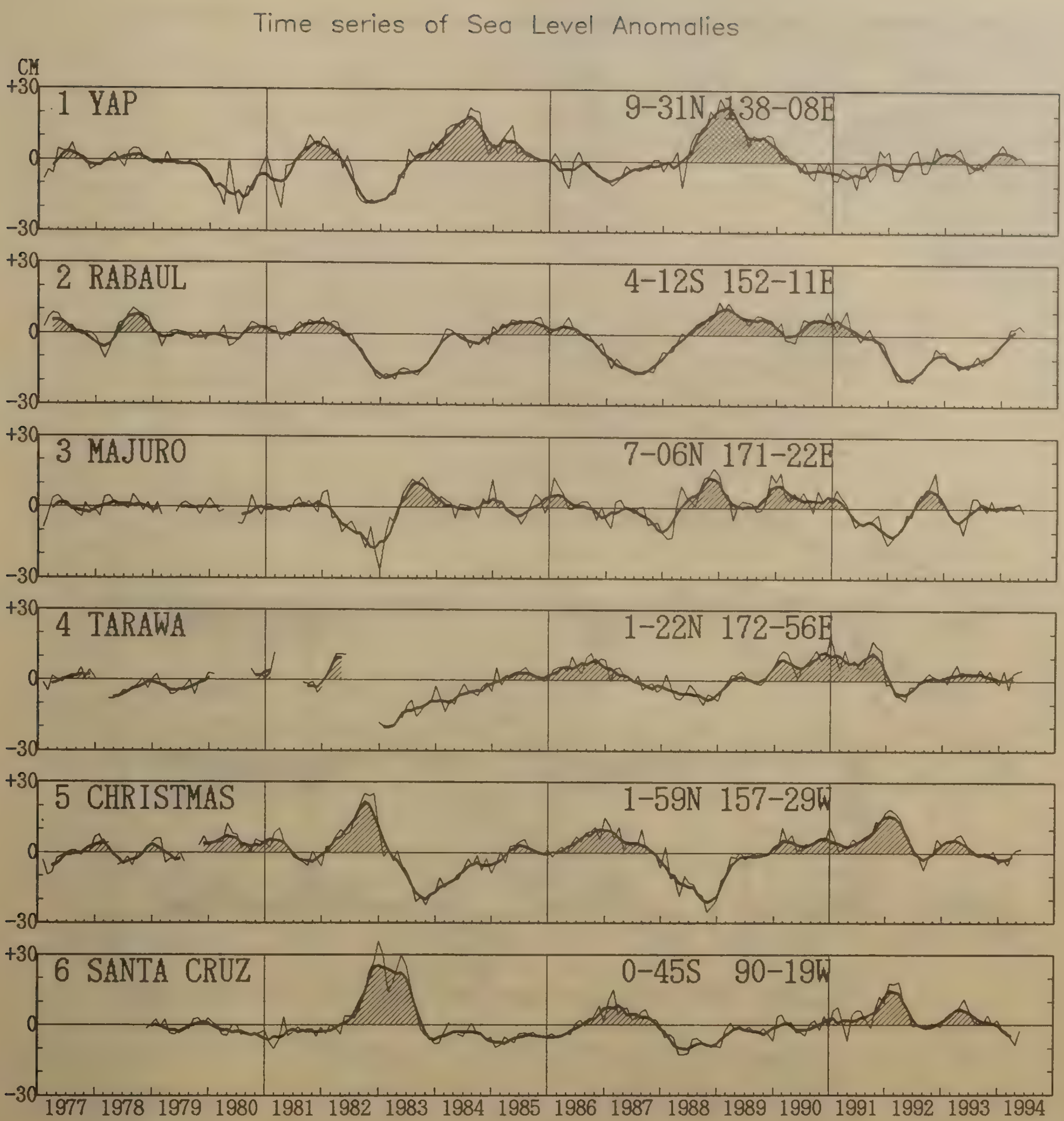
第９図　赤道太平洋表層水温時系列図（上：西部、中：中部、下：東部）

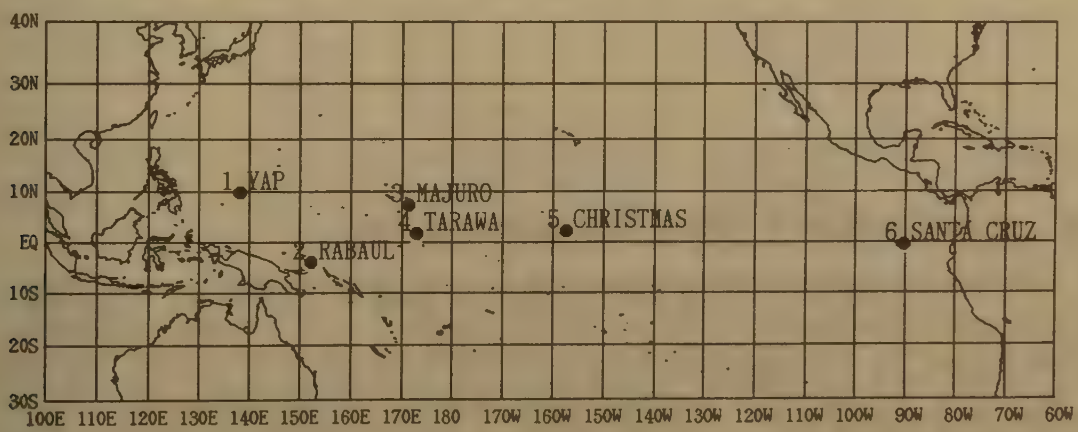
Fig.9 Time series of equatorial (2° N−2° S) subsurface temperature for the western Pacific (top, 150−160° E), the central Pacific (middle, 170−160° W) and the eastern Pacific (bottom, 100−90° W). The contour interval is 1° C with spotted shading for the values greater than 28° C.



第10図　太平洋の赤道に沿う20℃深度時系列図

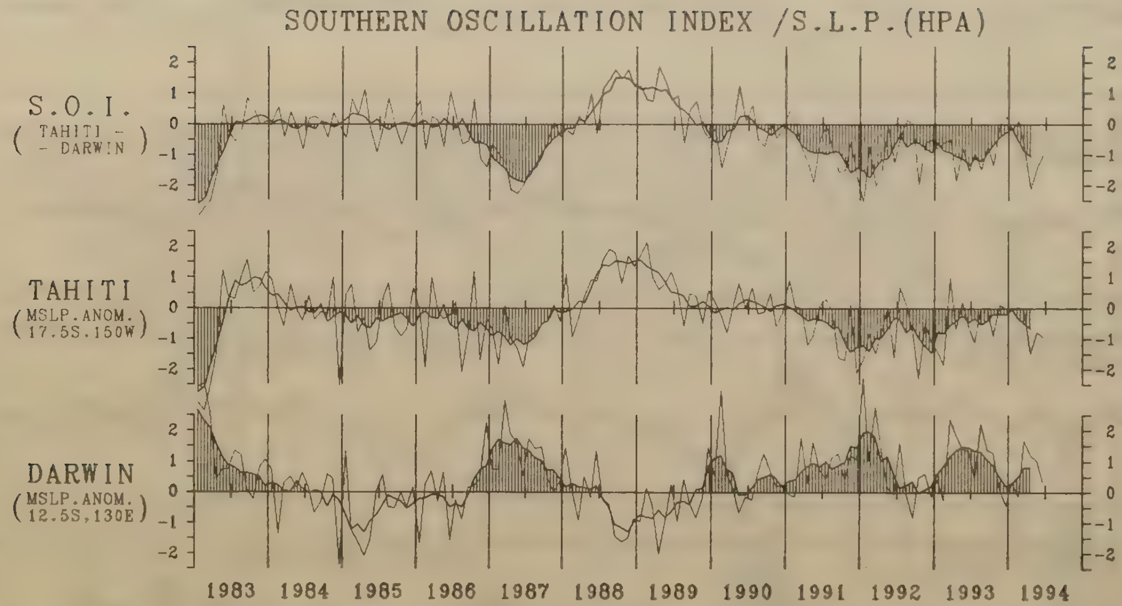
Fig.10 Time-longitude section of the depth of a 20° C isotherm along the equator in the Pacific Ocean. The contour interval is 20m with thick contour lines at 100m. Values shallower than 60m are shaded and those deeper than 140m are stippled.





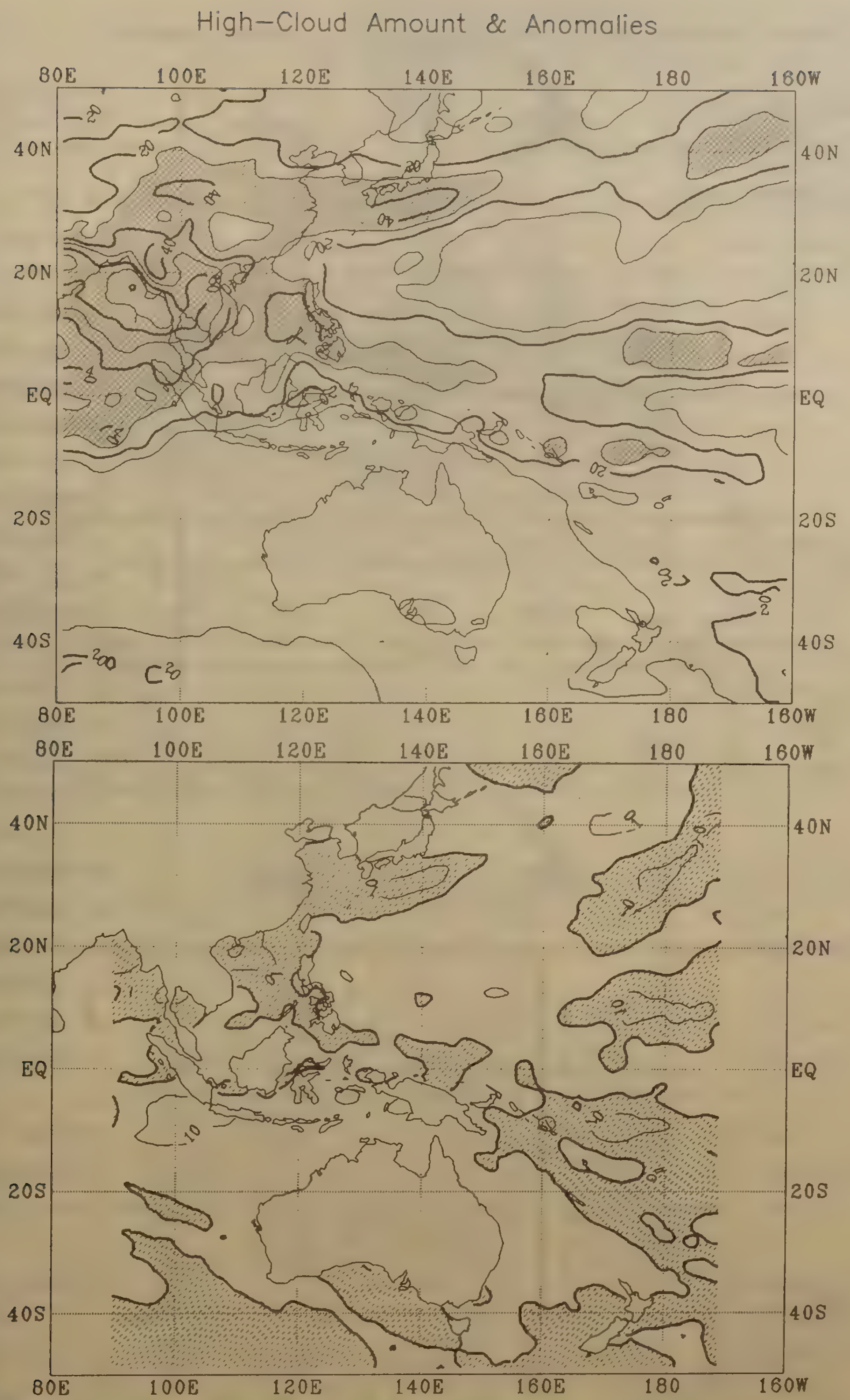
第11図　太平洋月平均海面水位偏差時系列図

Fig.11 Time series of sea level anomalies based on 1976 to 1990 monthly mean sea level obtained from the stations indicated at the bottom of the figure. Thin lines show the monthly mean and thick lines show their 5 month running mean. Positive anomalies are shaded.



第12図　南方振動指数及び海面気圧偏差時系列図

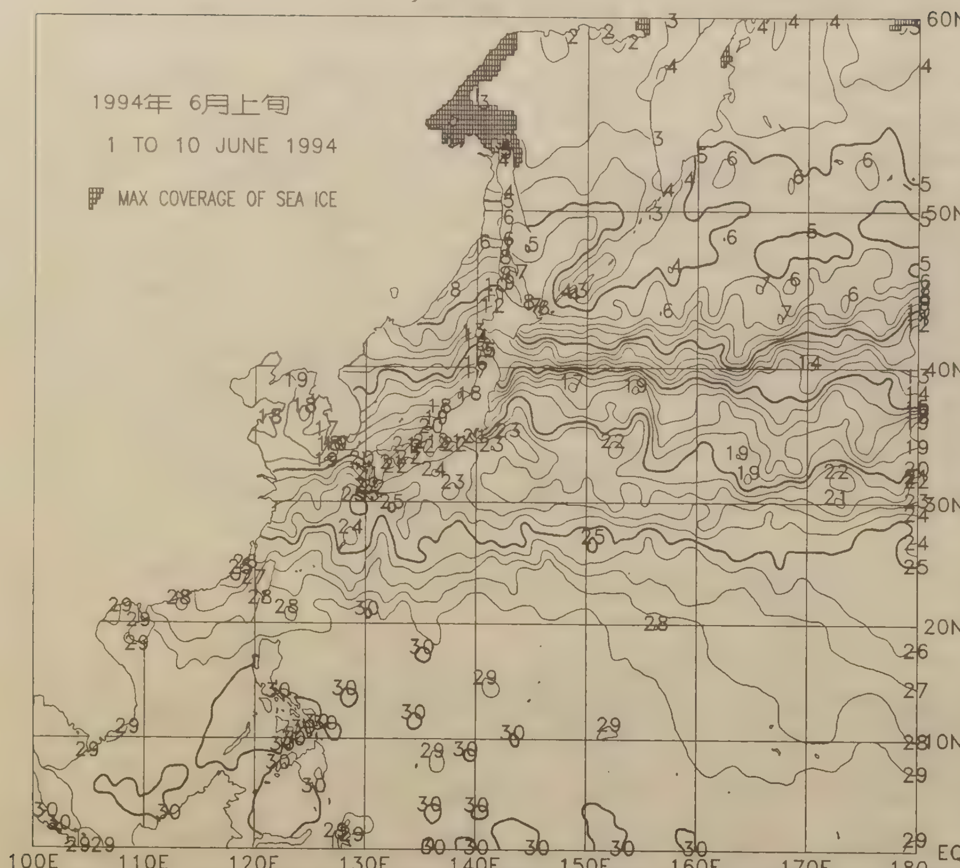
Fig.12 The Southern Oscillation Index (top) and monthly mean sea level pressure standardized anomalies at Tahiti (middle) and Darwin (bottom). Thin lines show the monthly mean and thick lines their 5 month running mean. Negative values (top, middle) and positive values (bottom) are shaded. Base periods for normals and standard deviations are 1961−1990. This figure is prepared by the Long−range Forecast Division, JMA.

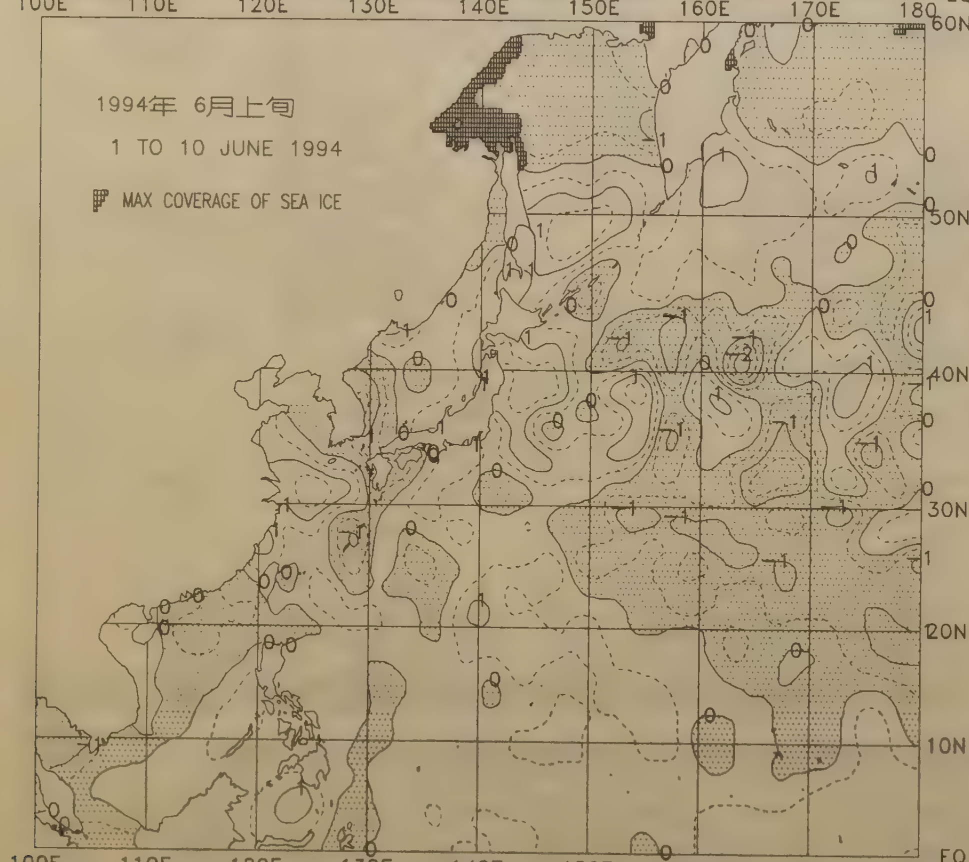


第13図　月平均上層雲量分布図及び偏差図（1994年 6月）

Fig.13 Monthly mean of the high−cloud amount (%, top) and its anomalies (%, bottom) in the equatorial Pacific for JUN 1994. The contour interval is 10%. Areas above 30% are shaded (top) and positive anomalies are stippled (bottom). Anomalies represent a departure from the 1978−1990 base period monthly means. This figure is prepared by the Long−range Forecast Division, JMA.

Ten-day mean SST & Anomalies





旬平均沿岸水温(℃)
Coastal Water Temperature

地名 (Index Number)	水温 Temp.	偏差 Anom.
石垣島(47918)	26.6	−0.3
那　覇(47936)	25.3	+0.4
名　瀬(47909)	-	-
足摺岬(47898)	22.6	+0.8
潮　岬(47778)	23.0	-
御前崎(47655)	21.0	+0.2
八丈島(47678)	22.7	+0.6
館　山(47672)	18.3	−1.0
小名浜(47598)	14.4	0.0
宮　古(47585)	12.5	+1.1
浦　河(47426)	9.4	+0.7
紋　別(47435)	12.3	-
稚　内(47401)	12.0	-
寿　都(47421)	13.5	-
江　差(47428)	14.4	-
飛　島(47587)	17.4	+0.5
輪　島(47600)	20.0	+0.8
西　郷(47740)	19.3	-
浜　田(47755)	20.8	-
厳　原(47800)	18.7	-
牛　深(47838)	20.1	-

海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

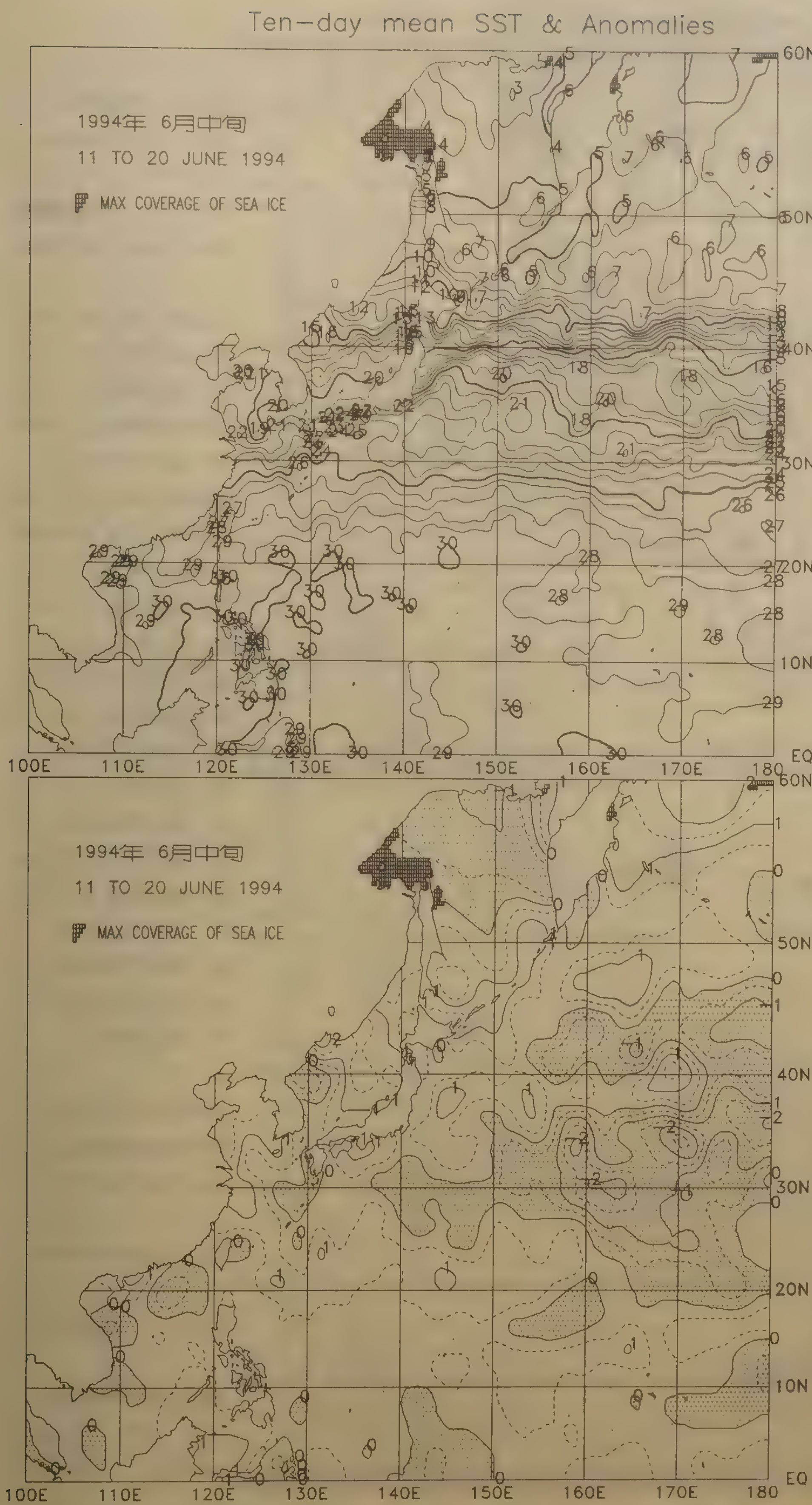
日本海 37.9N,134.5E
18.2

四国沖 29.0N,135.0E
24.5

東シナ海 28.2N,126.3E
24.7

第14図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1994年 6月上旬)

Fig.14 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 1st ten-day period in JUN 1994. Anomalies are computed with respect to the JMA climatology (1961–90). The contour interval is 1°C and additional anomaly contours of 0.5°C are shown. Negative anomalies are stippled.



旬平均沿岸水温(℃)
Coastal Water Temperature

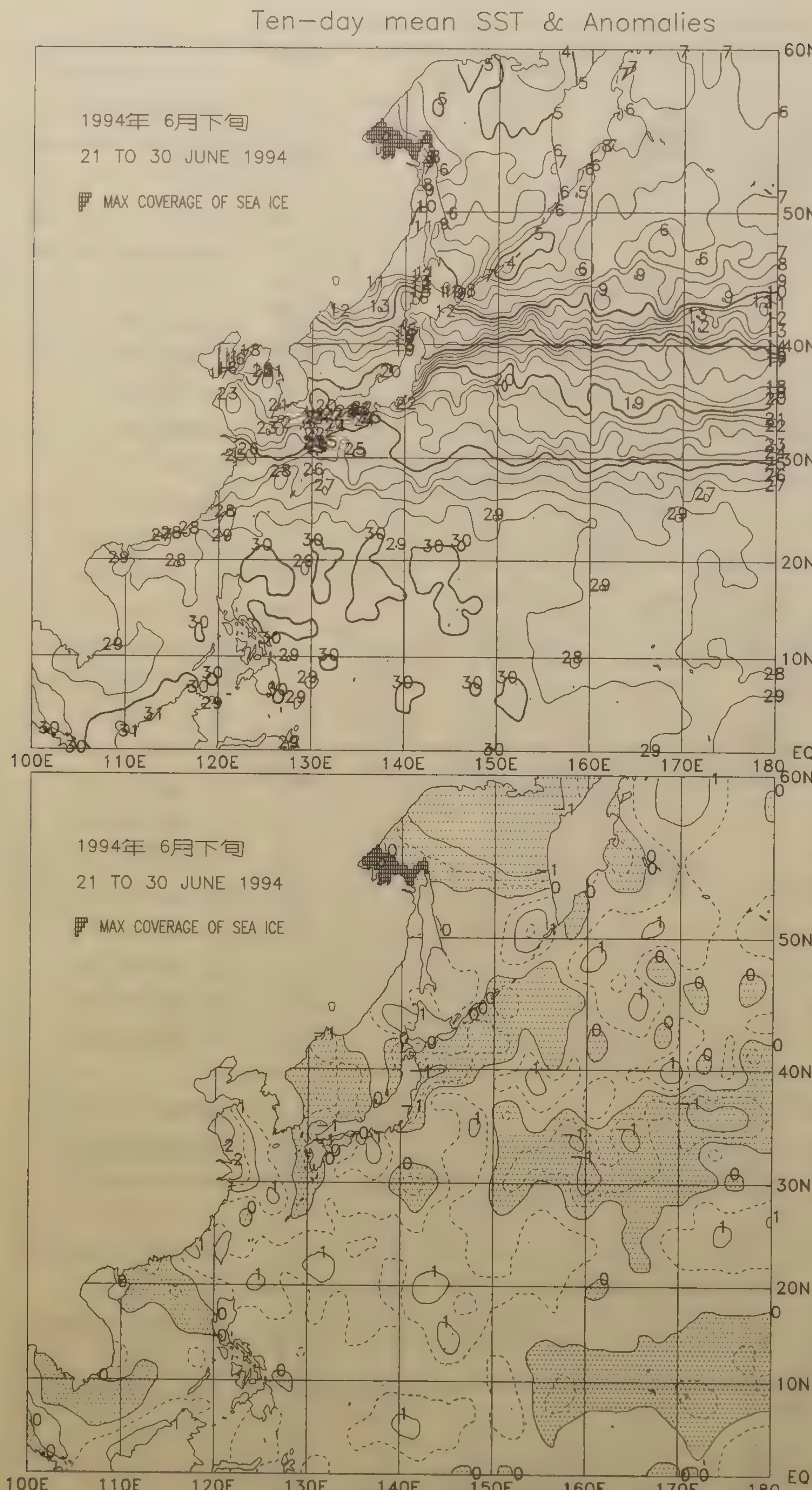
地名 (Index Number)		水温 Temp.	偏差 Anom
石垣島	(47918)	27.7	0.0
那　覇	(47936)	26.3	+0.9
名　瀬	(47909)	-	-
足摺岬	(47898)	23.0	+0.5
潮　岬	(47778)	23.8	-
御前崎	(47655)	22.8	+1.4
八丈島	(47678)	23.8	+1.0
館　山	(47672)	20.0	+0.1
小名浜	(47598)	16.1	+1.6
宮　古	(47585)	13.9	+1.5
浦　河	(47426)	12.2	+2.5
紋　別	(47435)	13.2	-
稚　内	(47401)	13.9	-
寿　都	(47421)	15.2	-
江　差	(47428)	15.2	-
飛　島	(47587)	20.2	+1.7
輪　島	(47600)	20.8	+0.6
西　郷	(47740)	20.6	-
浜　田	(47755)	21.0	-
厳　原	(47800)	20.5	-
牛　深	(47838)	20.4	-

海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

日本海	37.9N,134.5E	20.0
四国沖	29.0N,135.0E	24.9
東シナ海	28.2N,126.3E	27.0

第15図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1994年 6月中旬)

Fig.15 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 2nd ten-day period in JUN 1994. Anomalies are computed with respect to the JMA climatology (1961-90). The contour interval is 1°C and additional anomaly contours of 0.5°C are shown. Negative anomalies are stippled.



旬平均沿岸水温(℃)
Coastal Water Temperature

地 名 (Index Number)	水温 Temp.	偏差 Anom.
石垣島 (47918)	28.7	+0.2
那 覇 (47936)	26.6	+0.1
名 瀬 (47909)	-	-
足摺岬 (47898)	23.7	+0.6
潮 岬 (47778)	24.4	-
御前崎 (47655)	22.8	+0.9
八丈島 (47678)	23.8	+0.3
館 山 (47672)	21.6	+1.0
小名浜 (47598)	16.7	+1.1
宮 古 (47585)	14.1	+0.6
浦 河 (47426)	11.1	−0.3
紋 別 (47435)	13.8	-
稚 内 (47401)	12.7	-
寿 都 (47421)	15.1	-
江 差 (47428)	15.0	-
飛 島 (47587)	20.8	+0.8
輪 島 (47600)	20.1	−0.9
西 郷 (47740)	20.3	-
浜 田 (47755)	21.0	-
厳 原 (47800)	19.9	-
牛 深 (47838)	21.7	-

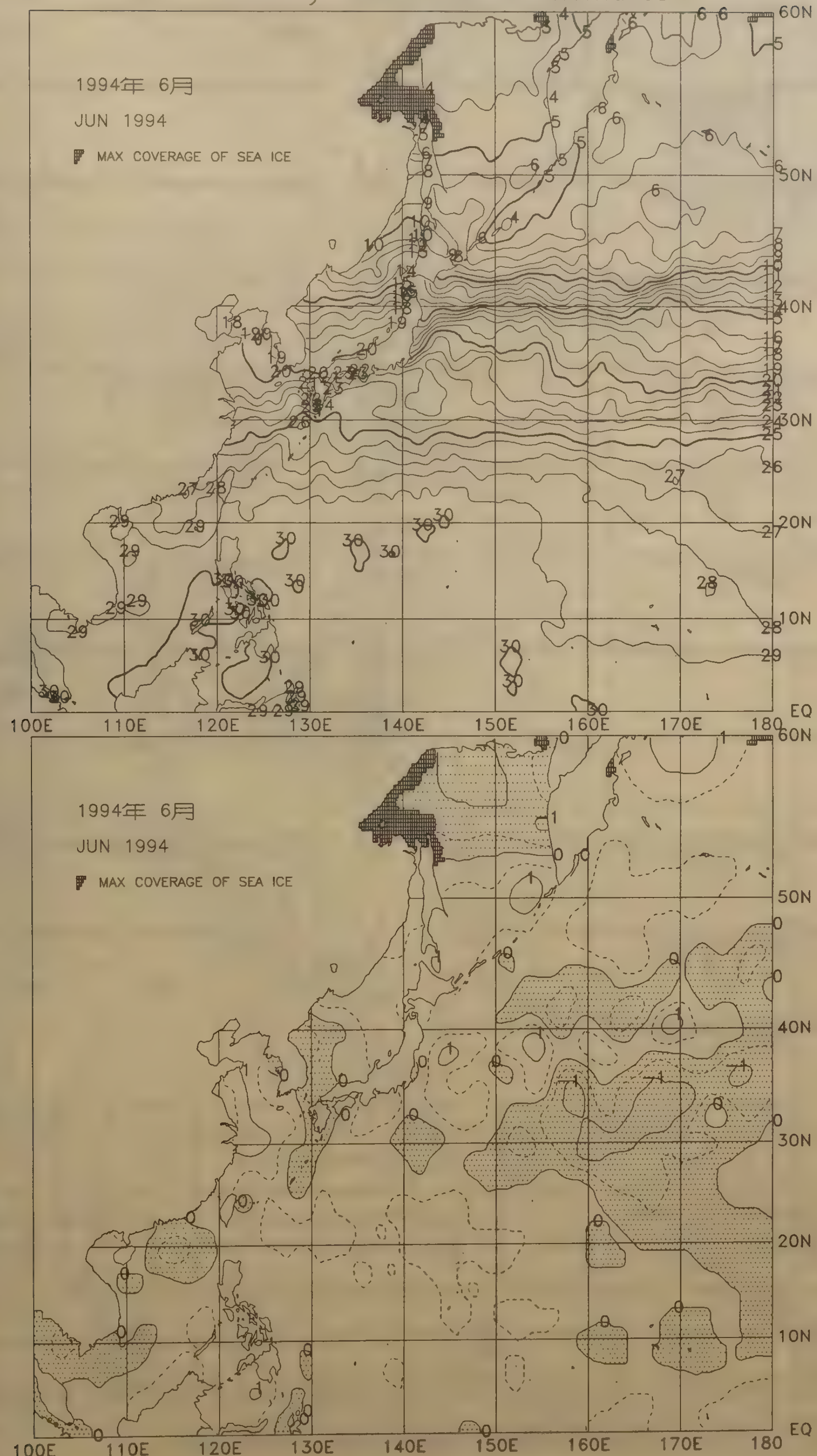
海洋気象ブイロボット
旬平均海面水温(℃)
Ocean Data Buoy SST

日本海	37.9N,134.5E	18.7
四国沖	29.0N,135.0E	25.5
東シナ海	28.2N,126.3E	29.7

第16図 北西太平洋旬平均海面水温図(上)及び偏差図(下)(1994年 6月下旬)

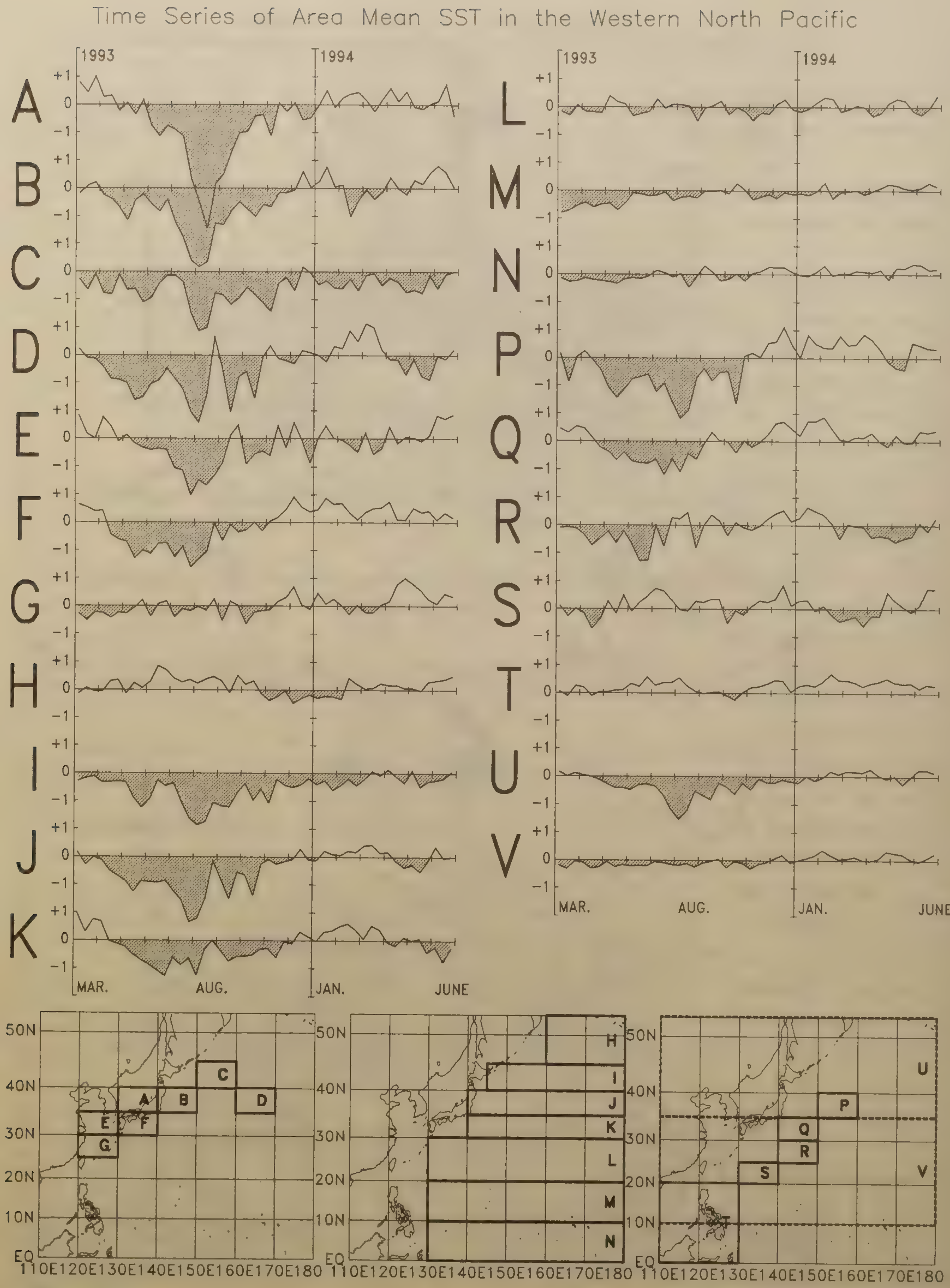
Fig.16 Ten-day mean SSTs in the western North Pacific (top) and anomalies (bottom) for the 3rd ten-day period in JUN 1994. Anomalies are computed with respect to the JMA climatology (1961−90). The contour interval is 1°C and additional anomaly contours of 0.5°C are shown. Negative anomalies are stippled.

Monthly Mean SST & Anomalies



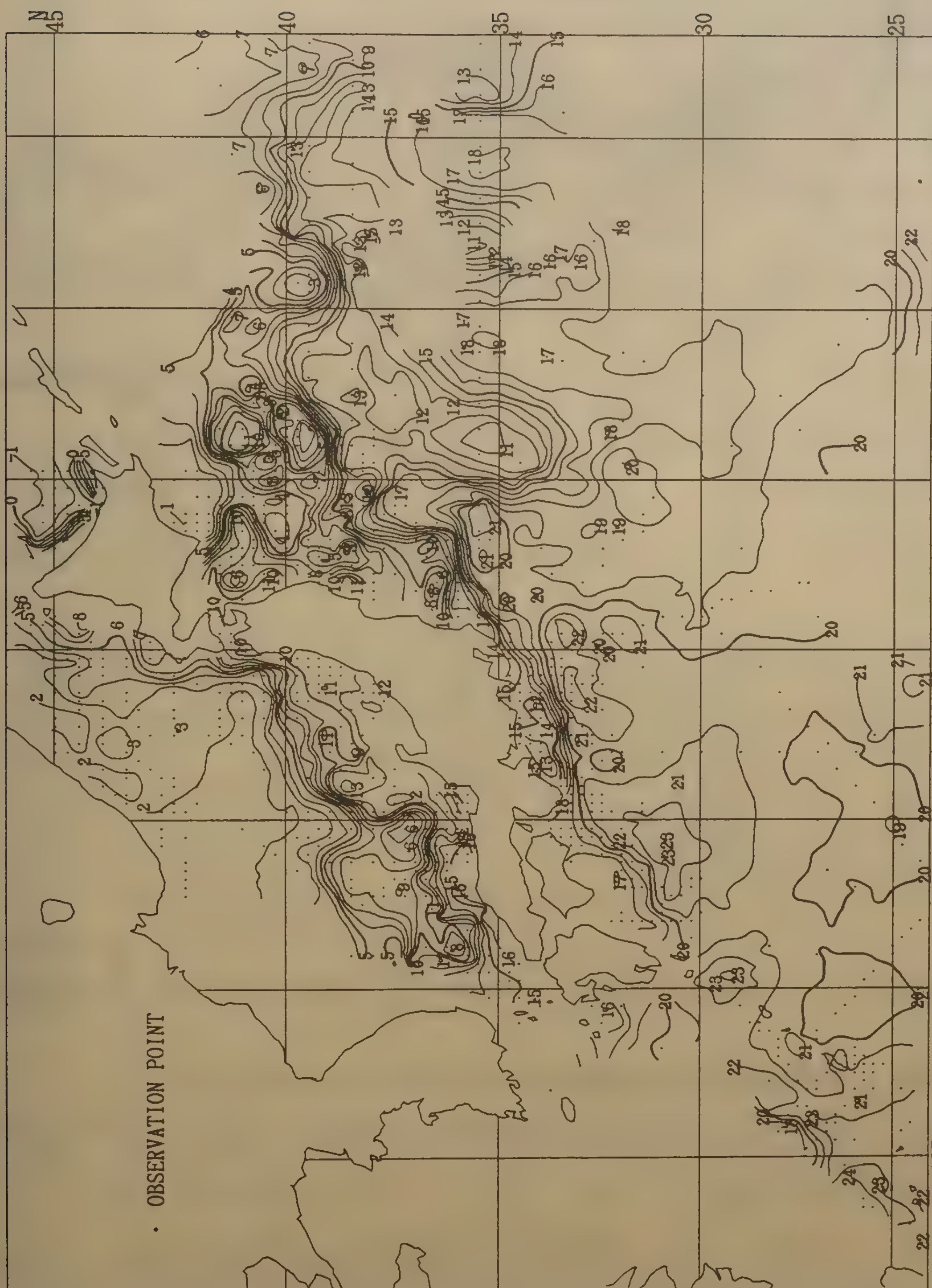
第17図 北西太平洋月平均海面水温図(上)及び偏差図(下)(1994年 6月)

Fig.17 Monthly mean SSTs in the western North Pacific (top) and anomalies (bottom) for JUN 1994. Anomalies are computed with respect to the JMA climatology (1961–90). The contour interval is 1°C and additional anomaly contours of 0.5°C are shown. Negative anomalies are stippled.



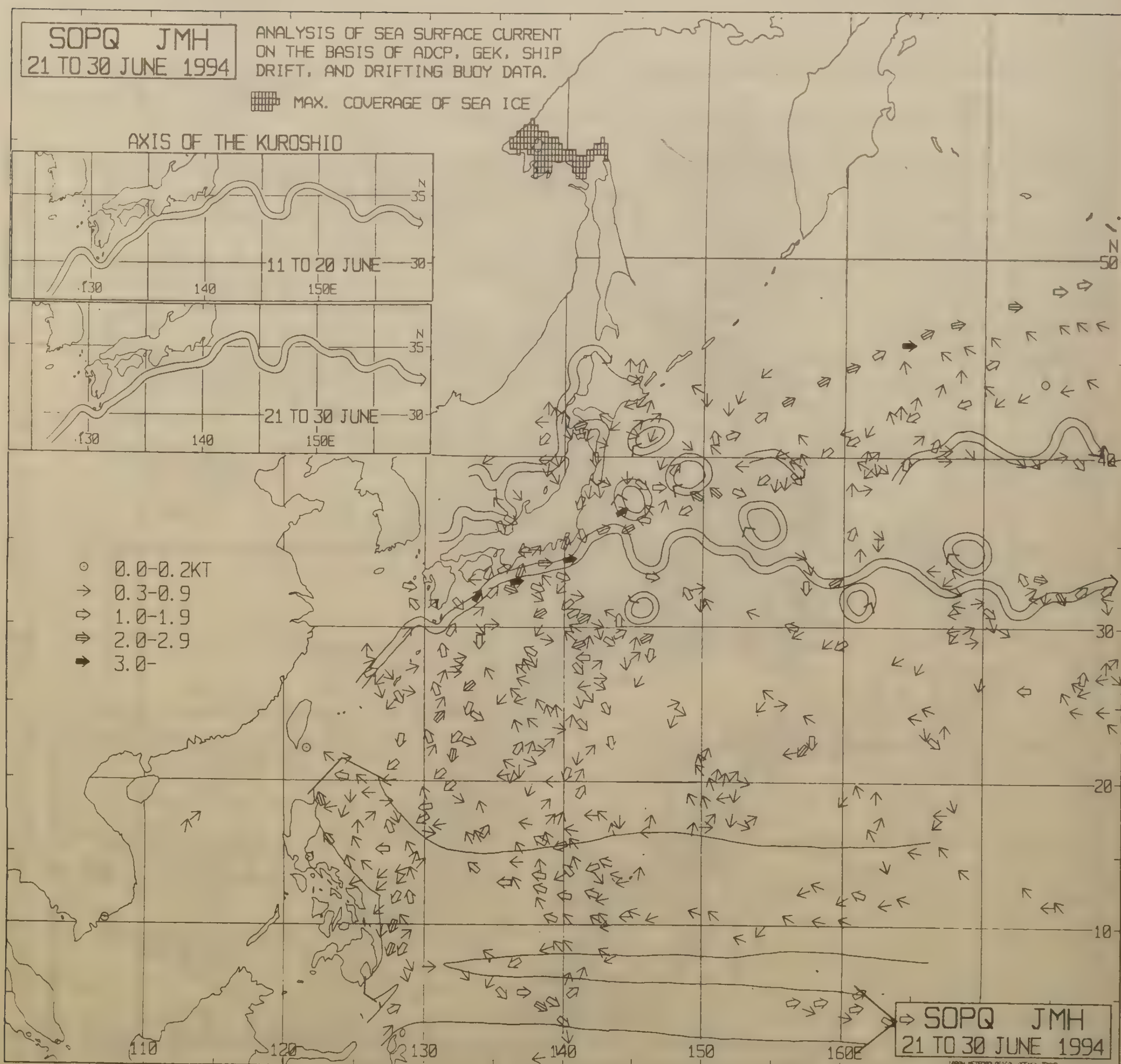
第18図　北西太平洋旬平均海面水温平年偏差時系列図

Fig.18 Time series of the ten-day mean sea surface temperature anomalies (°C) in the western North Pacific for the areas indicated at the bottom. Negative anomalies are shaded. Anomalies are computed with respect to the JMA climatology (1961–90).



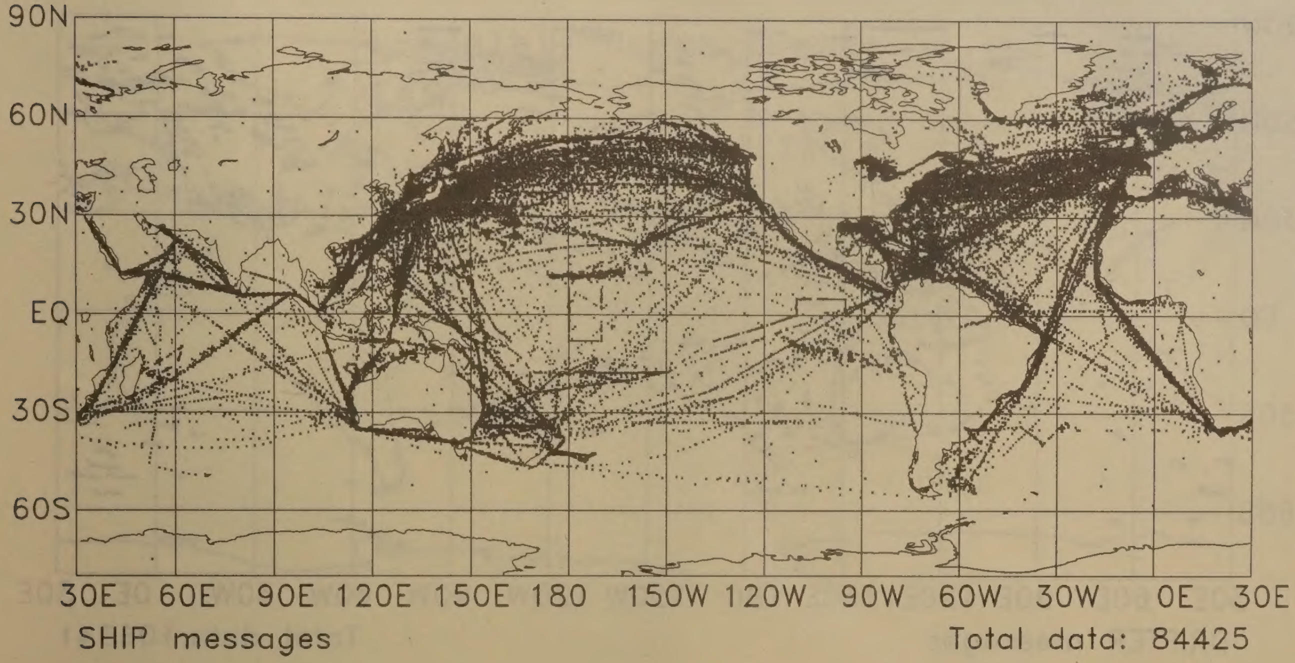
第19図 日本近海表層水温（深さ100M）図（1994年 6月）

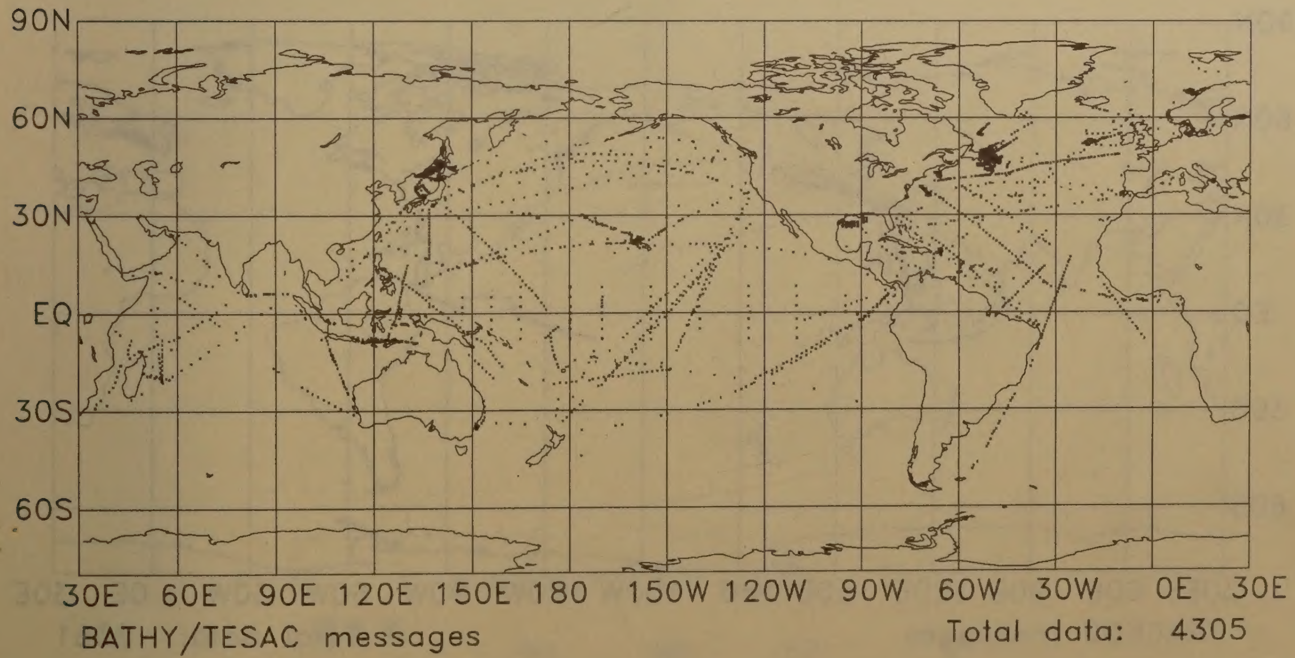
Fig.19 Subsurface (100m) temperatures in seas adjacent to Japan for JUN 1994.



第20図　北西太平洋旬平均海流図（1994年 6月下旬）

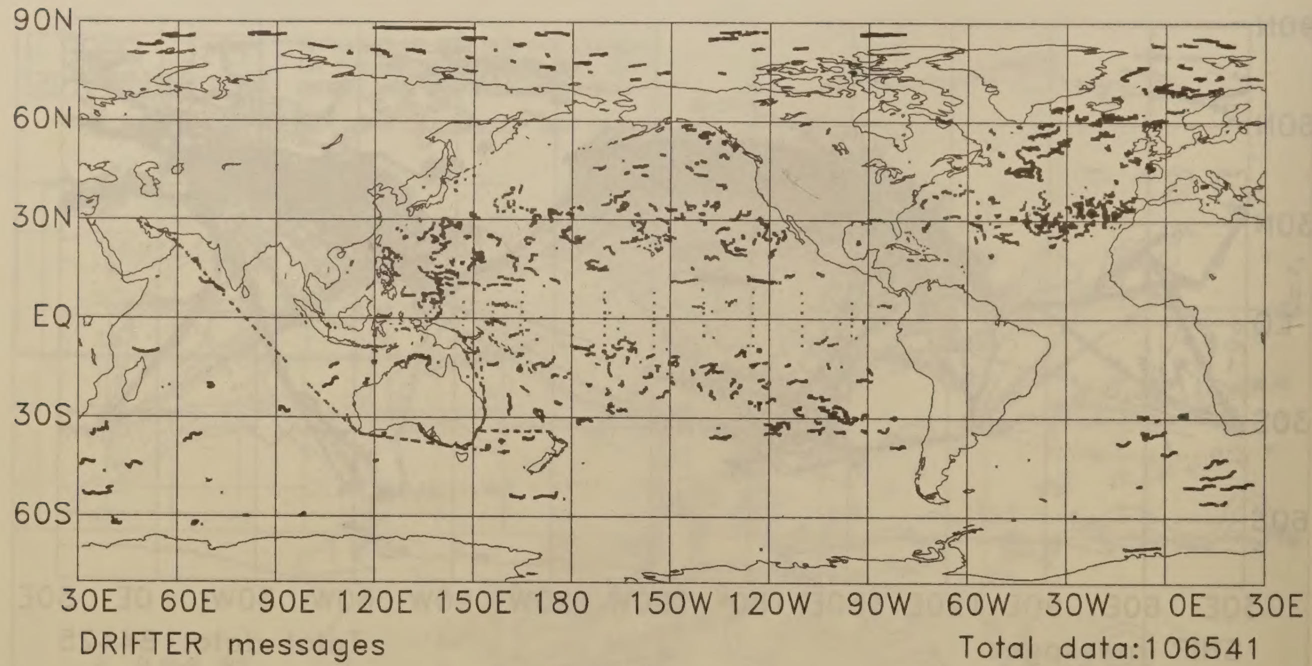
Fig.20 Ten-day analysis of the sea surface current in the western North Pacific for the 3rd ten-day period in JUN 1994. Small arrows indicate sea surface currents measured with acoustic Doppler current profilers, GEKs deployed in research vessels, and ship drift by merchant ships/drifting buoys during the month. Major currents such as the Kuroshio and the North Equatorial Current are denoted by larger open arrows.

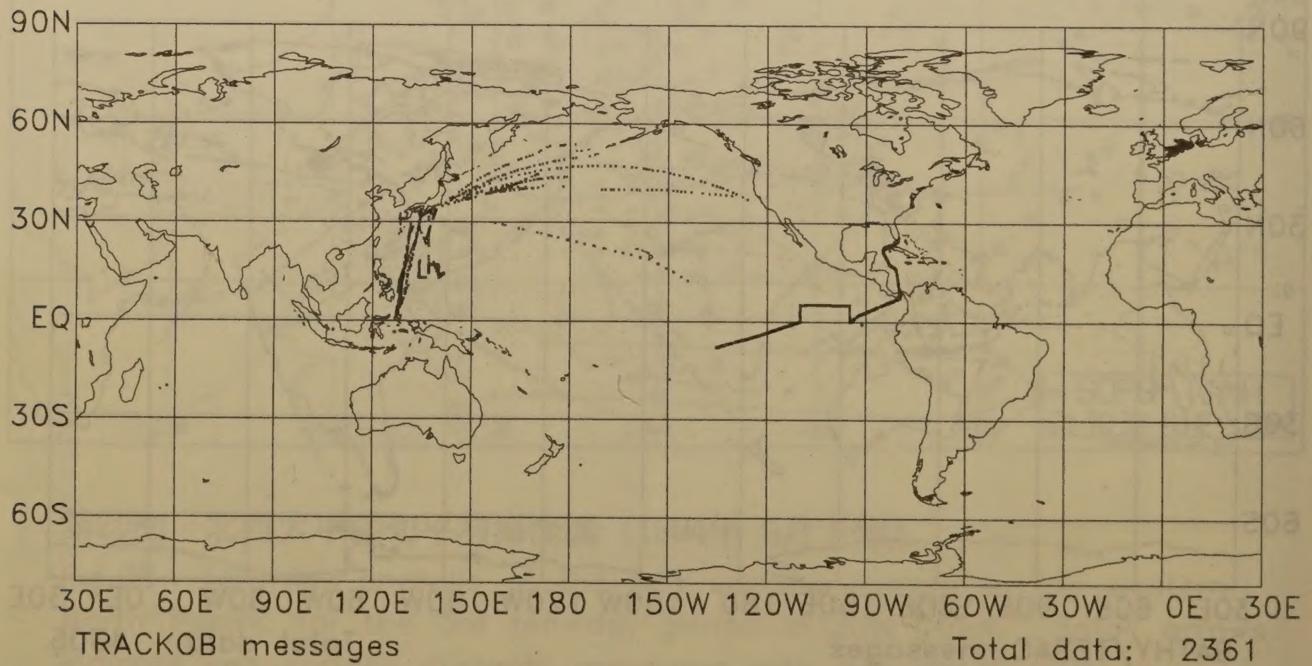




第21-1図　測点分布図(1994年 6月)

Fig.21-1 Geographical distribution of SHIP messages (SST data, top) and BATHY/TESAC messages (subsurface temperature data, bottom) for JUN 1994.





第21-2図　測点分布図(1994年 6月)

Fig.21−2 Geographical distribution of DRIFTER messages (buoy drift and SST data, top) and TRACKOB messages (ship drift and SST data, bottom) for JUN 1994.

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